HEALING FOODS

By Lynn Hoag

OCEAN WATER - HIGH BRIX - ELLEN WHITE

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Why this book . . . .

The world is sick. Everywhere we see tired, exhausted people in pain, slowly losing their hold on life. A great deal of this suffering can be avoided.

This book was created to teach God's solutions to these problems; to show how food causes disease and to show how food, properly grown, solves these problems and restores the joy of living.

I'm profoundly grateful to my late wife, Elizabeth, who got me started teaching gardening. She described me as "kicking and screaming" because I did not want to go there. Now it has become a passion with me, especially when we have children in the class. She then saw a need for a book and did so much to make our first book available.

A big "Thank you" to Sterling Evans, my grandson, for taking the initiative to get this book written and published. He did this without my knowledge of what was happening, so I was shocked to find out that I was writing a book called "Healing Foods"! Sterling and my wife, his grandmother, were close. Somehow the message got through to him that if it were up to me to write a book I would most likely put it off until a "more convenient time" which would stretch out to eternity. So thank you Sterling for doing this.

Also, I would like to thank Rene Baird and Auburn (Juan Sandoval) for help with collecting information, editing, making videos, and for the many hours of work in bringing this to fruition. You are very much appreciated.

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CHAPTER ONE

SOIL PREPARATION

- Taking A Soil Sample
- Balancing The Soil
- The Formula For Growth Anywhere
- Biochar
- Double Digging
- Forming The Rows

HighBrixGardens
Grow your own nutrition!

HIGH BRIX GARDENS

Garden Soil Test Order Form

The Soil Test is the cornerstone of the High Brix Garden Program. Why guess when you can know for sure? That is the guiding premise behind taking a soil test. Follow the steps outlined below to order your soil test.

Step 1 - Collect Soil Sample

Take a soil sample by digging a vertical hole in your garden to a depth of 6 inches. Take an even slice off the side from top to bottom with a clean spade that is not rusty. Place in a clean bucket that does not have any feed, salt, or fertilizer residues. Take several more samples like this in other areas of the garden. Mix all the soil together thoroughly in the bucket. After mixing, put 1 ½ cups into a soil bag or plastic Ziploc baggie.

Note: If you have more than one sample to send in, please fill out a separate Soil Test Order Form with each test.

Step 2 - Contact & Garden Info

Name ______________________ Phone ______________________
Address ______________________ Cell ______________________
City, State, Zip ______________________ Fax ______________________
Garden Id ______________________ Email ______________________

Garden Size (in feet): Length: ☐ Width: ☐ Area (multiply Length x Width): ☐

Type of Recommendations - Select only one: ☐ Organic ☐ Nutrient-Dense - recommended

Step 3 - Choose Your Tests

☐	S-1 Soil Analysis with Recommendations	$50.00
☐	S-2 Formazan - Microbial Activity & Soil Index	$22.00
☐	S-3 Soil Analysis without Recommendations	$25.00
☐	S-4 Boron	$10.00
☐	S-5 Standard Base Saturation / C.E.C. soil test	$18.00
☐	S-OP Sulphur	$10.00
☐	S-OP Organic Matter - Included in S-5 Test	$10.00

Note: The Tests in Red are highly recommended for the High Brix Garden Program. Boron can be tested every other year.

Has this soil been previously tested by International Ag Labs? ☐ Yes ☐ No
Lab Number ____________ Year ________

Step 4 - Payment

You can send a check, money order, or cashier's check or you may provide credit card info below:

Credit Card Type: ______________________
Card Number: ______________________ Card Expiration: ______________________
Signature: ______________________ Today's Date: ______________________

Step 5 - Send Your Sample

Print this page and mail with Soil Sample and Payment to:

International Ag Labs 800 W. Lake Ave., PO Box 788 Fairmont, MN 56031 507-235-6909

What's Next?

International Ag Labs will send you a **Soil Analysis Report** and a fertility **Recommendations Sheet**.

Dealer Info:

Would you like us to send a copy of your results to your dealer? Check one: ☐Yes - ☐No

Dealer Name: Lynn Hoag Lynnhoag@hotmail.com

TAKING A SOIL SAMPLE

GROWING delicious, nutrient rich plants starts with our soil. The soil is where our plants get many necessary nutrients, so that they can supply us with the vitamins, phytonutrients, enzymes and minerals our bodies need to stay healthy. So it is important to learn all we can about what's in our soil. Almost all soils are badly depleted and out of balance. The quickest way to learn what your soil needs for balance is to take a soil test and have it analyzed by a good agricultural lab. My personal choice is International Ag Labs, because their soil testing method is more accurate for gardening purposes. Many soil tests use strong acids and high temperatures to determine the mineral content of the soil, but plants don't use either of these things to take up nutrients. This is why such soil tests, although technically accurate, won't tell us what the right amounts of nutrients are for our plants.

Plants exude a jelly-like substance; a mild acid that dissolves rock powders and organic material in the soil. This way, their tiny feeder roots can take up the nutrients from those materials. The test International Ag Labs uses mimics the way plants take up nutrients from the soil, so we can get a better result that will tell us how we need to balance the soil for our garden.

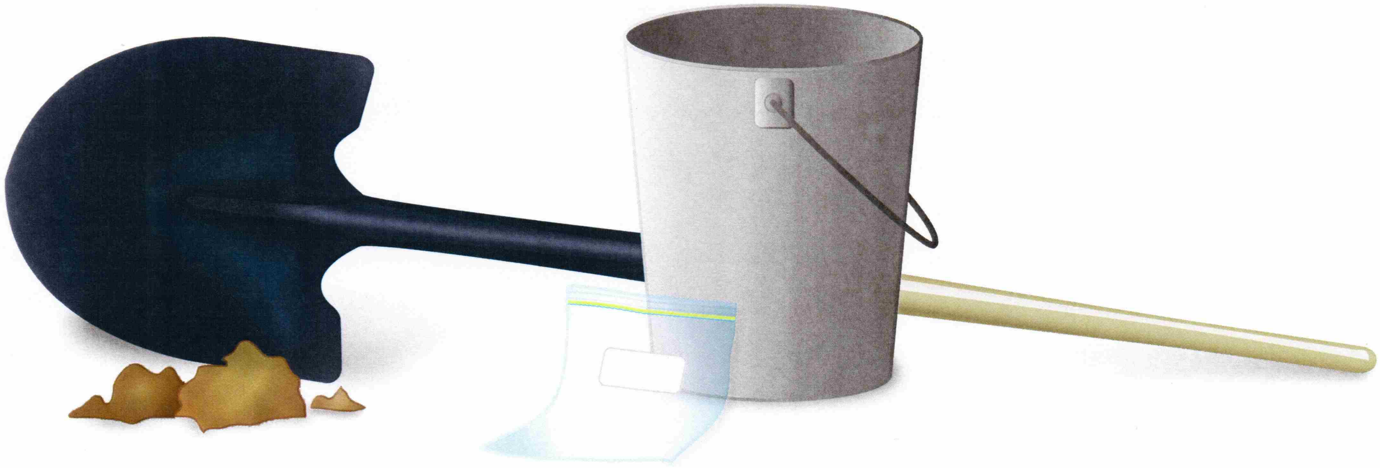
At this time, we can only take soil samples from within the U.S. or its territories. If you are outside of the U.S., call or email me for other options at 530-622-4967, or lynnhoag@hotmail.com.

There are several things we can do to improve our soil without using a soil test. We can enrich our soil with microbes and fungi, this will balance our soil over time (see section on Biochar and Mycorrhizae). We can also add nutrients into our soil using the Garden in a Box, which you can order on our website (www.suncountrygardens.com). The Garden in a Box is a kind of one-size-fits-all option that will improve the fertility of your soil, but it won't necessarily fix any mineral imbalances. Using Jared's Formula (see page 32) in your garden is another option for adding the nutrients your plants need to grow and produce, but again it isn't as good as getting a soil test and treating your garden with custom balanced fertilizers.

TO TAKE YOUR SOIL SAMPLE, YOU'LL NEED:

- A clean bucket (insert a new plastic bag in the bucket)
- A clean Shovel (without any rust)
- Soil from several different locations in your garden
- A Zip-Lock Bag (1 quart size)
- Smallest Flat-Rate Mailing Box (at U.S. post office)

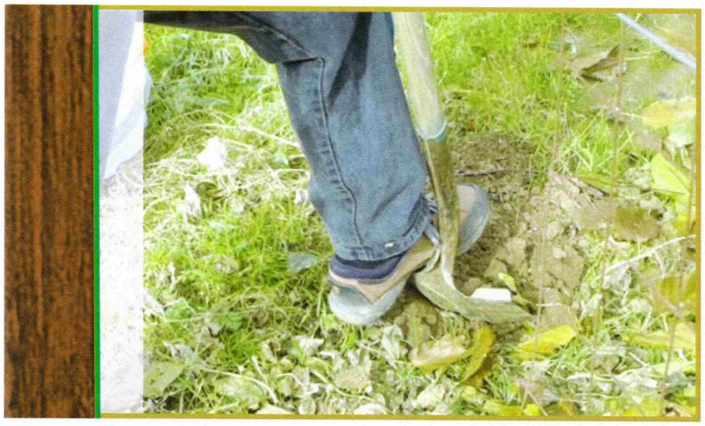
NOTE: When taking soil from your garden, avoid compost piles, fertilizer spills, burn piles, or any other unusual areas. We want to find your native soil with as few contaminants as possible in it. If different parts of your garden have been treated differently, you may need to send in multiple soil tests.



DIRECTIONS:

Step 1: Remove the organic material from the top soil layer (about 1 inch) and set it aside.

Step 2: Dig down at least 6 inches and place a shovel-full in your bucket.



Step 3: Repeat this in three or four different spots in your garden area.

Step 4: Mix the dirt together until fine. Pour out on a work surface and remove stones, roots and any organic matter.

Step 5: Fill out the Garden Soil Test Order Form (on page 2). If you want a free consultation and recommendations, check "yes" at the bottom under "Dearler Info" and call or email Lynn Hoag when you get your results.

Ziploc
Thank you for using Priority Mail service

Step 6: Package and ship your soil along with the Garden Test Order Form to: International Ag. Labs, 800 W. Lake Ave, Fairmont MN 56031. Additional order forms are available online at:www.suncountrygardens.com.

BALANCING THE SOIL

Step 1: When you receive your recommended custom fertilizers, divide the fertilizers in half.

Step 2: Broadcast one half as evenly as you can over the whole garden area. The material will be in rock powders, fine sands, heavy sands, pellets and crystals. So a spreader won't work. I like to just spread it by hand on the first pass. Then with the second half of the materials, I do another pass and fill in the remaining gaps.

Step 3: Now dig in the fertilizer.

Step 1:

Step 2:

Step 3:

Final Result:

FORMULA FOR GROWTH ANYWHERE

How to use Ocean Water or Ocean Salts on the Garden

With this formula, you should be able to grow a good crop anywhere on Earth. You need ocean water, nitrogen, phosphate, and in some cases iron will be needed as well. With this combination, you can grow a crop that is disease and insect resistant, and does very well.

Why We Need Phosphate & Iron

Phosphate and iron don't stay in the solution of ocean water very well; they sink to the ocean floor. There isn't enough iron, nitrogen and phosphate in ocean water for land plants, so using ocean water alone won't remedy the deficiency. Now, some places have excess phosphate in the ground, but in most places there's a lack of phosphate. I often get results from soil tests where the phosphate is way down, at about 3-5% and we want quite a lot of it for healthy plant growth; the ideal amount is 167 lbs. per acre.

Sources of Phosphate

There's a lot of phosphate in the ocean, but it's in bones, shells and little nodules on the ocean floor. So if you get bones and shells from any source and bake them, then they will powder easily and will be a readily available source of phosphate for your plants. It takes many years for the elements in those bones and shells to break down on their own, so you need to bake them in order to speed up the process. You can make a big bonfire and once they're baked, they'll powder and be a wonderful source of phosphate.

If you are going to use bone, it doesn't have to be from the ocean, it can be from land animals too. If you get bone meal from a slaughter company, however, that's not a safe product today because of mad cow disease and other things like the administering of artificial hormones and feeding of GMOs to farm animals. A safer alternative to animal bone is soft rock phosphate; it has no diseases and is usually far less expensive.

Two good sources of iron are seaweed and iron sulfate. It's fairly easy to add iron to your soil if you have a deficiency, you can just throw a handful of rusty nails into your garden. Seaweed is an even better method, as it contains not only iron, but many other trace elements and beneficial growth hormones for your plants. You can buy organic seaweed fertilizer, or if you live near the ocean you can harvest seaweed yourself. Place it directly in the garden and let it break down into the soil, or you can add it to your compost pile. Seaweed supplies nutrients to the microbes in your compost, and so can aid the composting process.

Why We Need Nitrogen

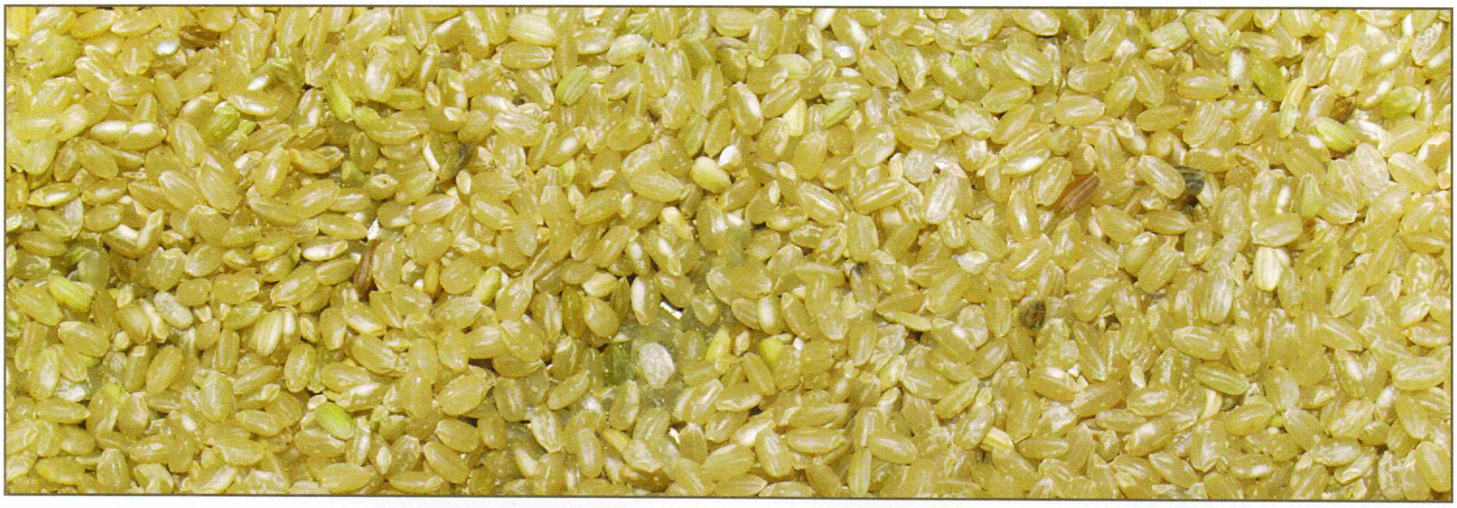
Nitrogen is one of the main nutrients land plants need, without it they will not grow. It is a major part of chlorophyll, the chemical plants use to harvest sunlight energy. In protein as well, one of the main ingredients is nitrogen, so it's important for our plants to have enough of it in order to form their proteins.

Nitrogen Sources

1. Seed Meals

Anything that has protein in it will have nitrogen, so adding things with protein in them to our garden will boost nitrogen levels. One of the best sources of organic protein is seed meal; almost every seed is concentrated with protein. Besides protein, there are many other nourishing things in seeds as well, since a plant concentrates its nutrients in the seeds because it wants to reproduce. When we eat bread we eat the seed, we don't eat the straw. This is because there are far more nutrients in the seed.

Any grain product from your kitchen can be used as a nitrogen source. If you have any flour that's gone bad, use that; it makes a good fertilizer. You can use whole seeds and grains as well. I had a bag of flax seed that was rancid, but I didn't throw it away, I put it in the garden because it's a good fertilizer. At one time my wife had some rice that got weevils in it and she threw it out. Because it was my job to take out the garbage, I rescued it. I took that rice to the thinnest, rockiest, poorest soil in the



whole acre we had at the time. I spread it in a circle 10 feet in diameter and dug it in. Then I planted a few cucumber seeds in the middle of that circle. We ended up with the best cucumbers ever from that soil. So that rice was a good source of protein, nitrogen and a lot of other nutrients because it was whole grain brown rice.

In the past, cottonseed meal was a good product. For one thing, it's a waste product so we would grind it up and it'd make good fertilizer for the garden. I don't use that anymore, however, because cotton has been genetically modified. We don't want to use anything that has been genetically modified because we see harmful effects on our plants, our soil, and on us.

2. Compost

Let's go onto another source of nitrogen: compost. As far as nitrogen levels go, compost is not very high when we look at the numbers, but because it's alive with all kinds of life, that life in the soil regenerates nitrogen. Earthworm castings are also very good sources of nitrogen. Now if we look at the nitrogen numbers for earthworm castings it's 2-2-2, two nitrogen, two phosphate and two potassium. It doesn't seem like it is very high, but again, because of all the life in earthworm castings they will do far better than a chemical fertilizer with a bigger fertilizer number. Those microbes are taking nitrogen from the air and supplying it to the plants.

3. Manure

Manure is another source of nitrogen. Bird manure is best, because they don't have urine. The urine and fecal matter is all mixed together, and so it's hotter; it has more nitrogen in it. Now, if you know what's being fed to your chickens or animals, then manure may be a good source of nitrogen for your garden. But commercial manure isn't a good option because it comes from animals that are fed standard feed with genetically modified ingredients in it. Most animal feed today has lots of genetically modified organisms like corn, soy, alfalfa and sugar beets. It's important not to use GMOs, they will ruin your garden.

BIOCHAR

What is Biochar?

Biochar is charcoal that has been inoculated. Inoculation is when we introduce organisms like bacteria and fungi into something. In the case of biochar we add microbes and mushroom plants to plain charcoal and we get a fertile material. When we look at a piece of charcoal under a microscope, we see that it's got millions of little holes in it like a sponge. These were created when gas escaped from the heated wood.

Microscopic image of charcoal.

It's a perfect place for these microbes to live. Now, when we place biochar into our garden, the microbes digests the minerals and organic matter we put into the soil, making a perfect solution for the little feeder roots of our plants. Through a magnifying glass you can see these roots, they have tiny white hairs that take up the nutrients into the plant.

How We Learned About Biochar

One of the ways people learned the usefulness of biochar was by going through the Amazon jungle, which gets so much rain that it washes nutrients out of the ground. There's only a little calcium, potassium and little phosphorous and other nutrients in that ground, yet the amazon jungle grows wonderfully well. However, as you go through the jungle you'll find almost no human food, except in tiny little parts of ground scattered throughout the amazon jungle.

So scientists asked "why is that patch of ground over there, only about 1/8th of an acre or less, fertile?" In that tiny area things grew and gave incredible produce without adding any fertilizer. Just a few feet away the same plant would still grow, but it wouldn't produce any fruit. Scientists got interested in this, so they dug down into the soil and in every case what they found was black earth (also called *tierra prieta*). They found broken pottery in this tierra prieta, and so confirmed these were old village dump sites. What villagers did back then is the same thing they do today, they took everything to the dump and then they burned it. In essence, they were creating charcoal - this terra prieta - and what that charcoal seems to be able to do is hold onto minerals and almost regenerate itself. Now the interesting thing is, because there was broken pottery, they could date these sites. And what they found, in every case, is that these ancient dumps were at least 1,500 years old and as much as 2,500 years old. So when we add biochar in the garden, we can make our soil permanently fertile the same way.

If we compost our waste, in a very short time it's gone back to carbon dioxide, oxygen, hydrogen, water, etc. But, if we make charcoal out of the same waste, it changes its structure so it doesn't decompose and remains stable for thousands of years in the soil.

What are Mycorrhizae?

If you go into the forest and kick up the duff on the forest floor, occasionally you'll see what looks like cobwebs growing through it. That's the mycorrhizae, the symbiotic relationship that forms be-tween fungi and the roots of plants. Plant roots expel a jelly-like substance that feeds the fungi, and the fungi gather water and nutrients from a very broad area and feed it to the plant. Cultivating mycorrhizae gives the best growth I have seen anywhere, even better than the growth seen in aero-ponics.

Mycorrhizae filaments in soil.

So let's go into the woods, into an area that people haven't touched; where there hasn't been any agriculture for 1,000 year or so, and yet that soil will be fertile without any human intervention or amendments. How could this be? You see, God keeps the forest fertile; he designed the microbes and fungi to work together with the plants, keeping the soil both alive and fertile for centuries.

Often times through our agriculture we make matters worse by upsetting the ecosystem that exists naturally in the forest. But it would be going too far to decide, as some suggest, that we make no amendments to our soil, because plants can't create those minerals which are not already in the soil in an adequate amount. These nutrients must be added from another source to begin with.

Soil Amendments & Permanently Fertile Soil

Since Noah's flood, no matter where we go on earth we have unbalanced soil. We have too much of something in the garden, and not enough of something else. So we take soil tests and balance it the best we know how to get those missing minerals in there. We also use ocean water, which has 92 different minerals all in a perfect balance, to feed our plants. And then we add the microbes and fungi which also feed on those minerals, and as a result we get incredibly good growth. By combining these elements with biochar, we retain the living organisms and the nutrients in the soil indefinitely. If we do all these things, the soil becomes permanently fertile, and for about 5 years it increases in fertility each year with very little input into the garden. From about the 5th year onward, our garden stays just as fertile and continues doing very well.

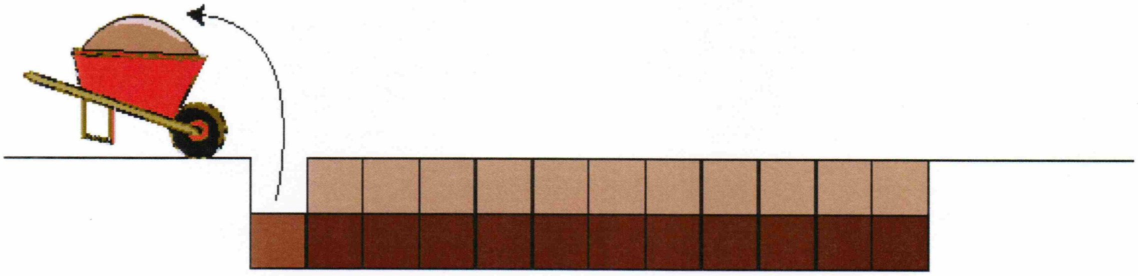
Since nitrogen is one of the main nutrients plants need. We must replenish it consistently because there is a nitrogen cycle, where nitrogen is constantly going back into the air. We can do this organically by several different methods, such as by developing mycorrhizae where the microbes create nitrogen nodules on the plant's roots. These microbes take nitrogen from the air and put it into the nodules, storing it for our plant and making it available in the soil for future plants. This is a better source of nitrogen than the chemical sources we can buy because the molecular structure of the nitrogen compound is in the form that our plants can most readily use.

Some plants can be innoculated in order to develop these nitrogen-storing relationships. Different microbes work with different types of plants, and some plants (such as beets, carrots and cabbage) don't in-teract with microbes to store nitrogen. It is primarily legume plants which store nitrogen in nodules by working with *rhizobium* microbes, so it's good to plant legumes in your garden and innoculate with rhizobium in order to replenish nitrogen.

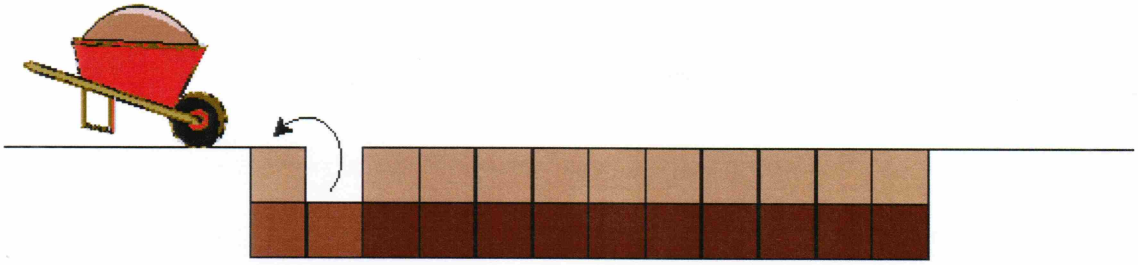
Nitrogen storing nodules on roots.

DOUBLE DIGGING

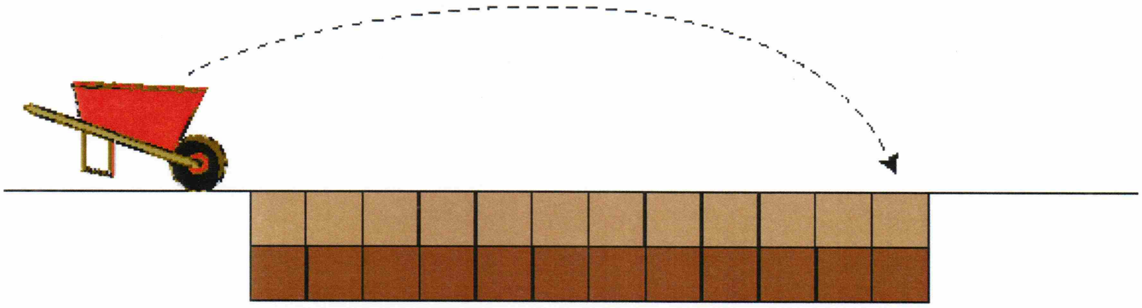
1. The purpose is to loosen the soil deeply while keeping the topsoil on the top and the subsoil undeneath.
2. Remove the soil one shovel full deep in a 2' feet X 2' feet section and place it in a wheelbarrow.
3. Loosen the soil in the hole you just dug as deep as your shovel or fork will allow (do not remove this subsoil).
4. Now take the next 2' foot section of your row and move that soil on top of the subsoil you just loosened.
5. Loosen the subsoil in this 2' foot section and repeat until you get to the end of the row.
6. Cover the hole at the end of the row with the topsoil in the wheelbarrow.



Dig 1 foot deep and put soil into container to save for later. Loosen the soil beneath hole and leave it where it is.

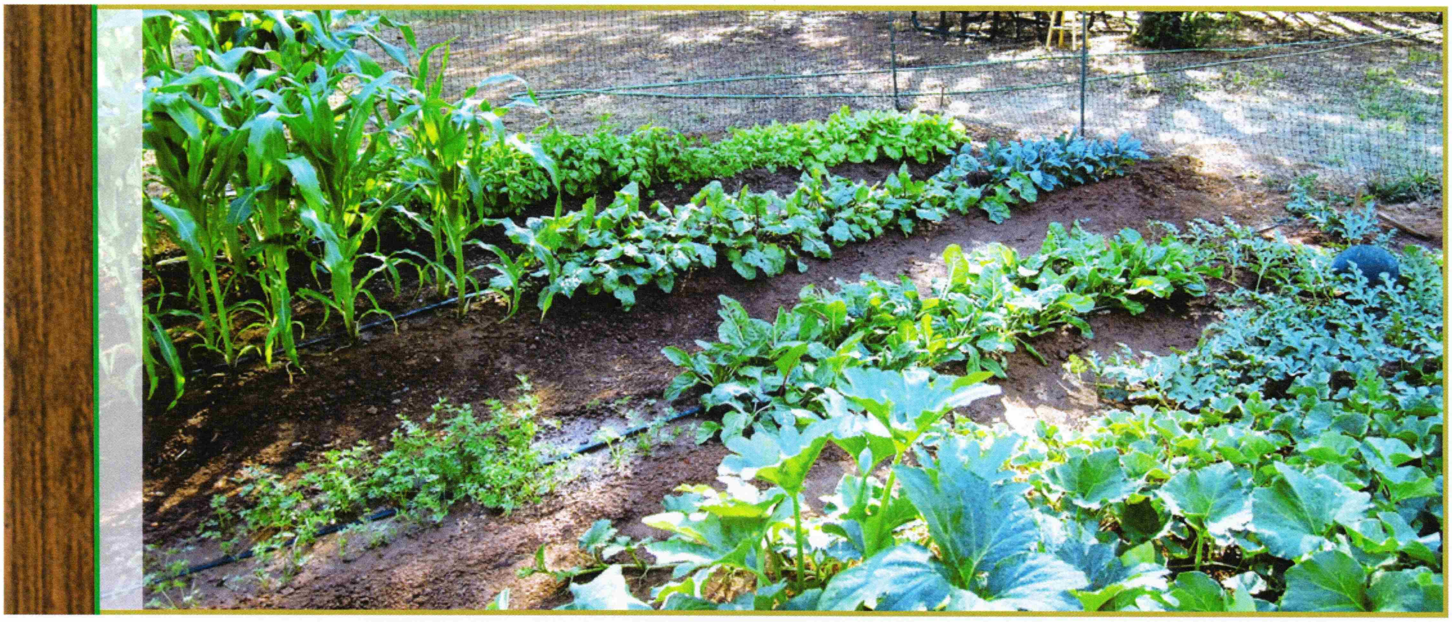


Move to next 2'x2' segment and dig again, this time putting the soil into the previously dug hole. Again, loosen soil beneath hole and leave where it is.



Once the whole row is dug, use the soil in the container to fill the hole at the end.

FORMING THE ROWS



DIRECTIONS:

Step 1: With stakes and string, mark the rows you want to create 5 feet apart on center and 30 feet long.

TIP: In my own garden, if the space is available, I have increased the distance to 6 feet because plants grow so big. When growing vining plants, like watermelon and winter squash, go to 10 feet on center.

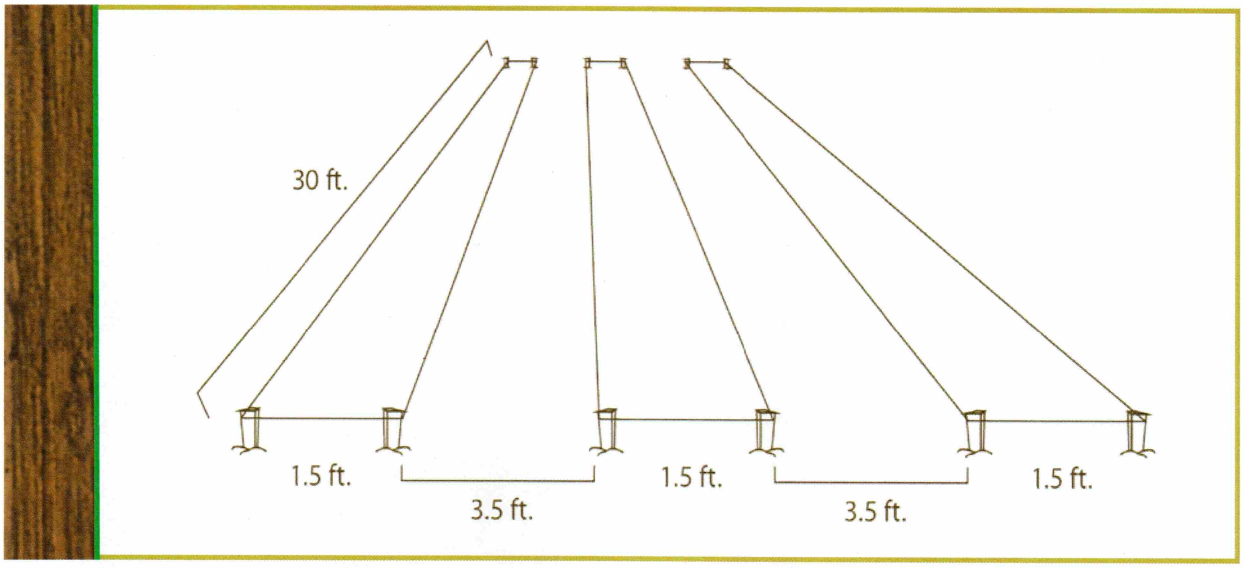
Step 2: Double Digging: Perform double digging as described on the previous page for the space you will be using in your garden.

Step 3: To make the first row, mark two rows with string 18 inches apart. This will give you three and one half feet walkways with rows being 5 feet on center. Repeat until your rows are complete.

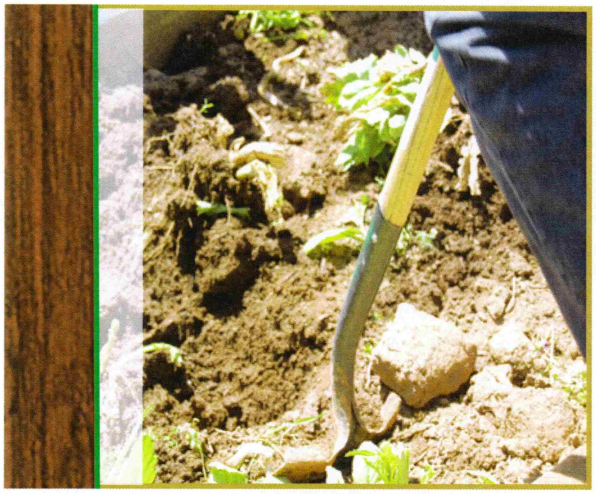
Step 4: Rake the soil from the sides to build up the 18 inch wide rows. Using a level and a 8ft 2x4 board, level the planting bed. This is important for irrigation, fertilizer and weed control.

Step 5: Build up 4 inch dikes on either side of rows using your rake. The purpose of this is to hold the water and fertilizer in the planting bed and help eliminate weeds.

Step 1:

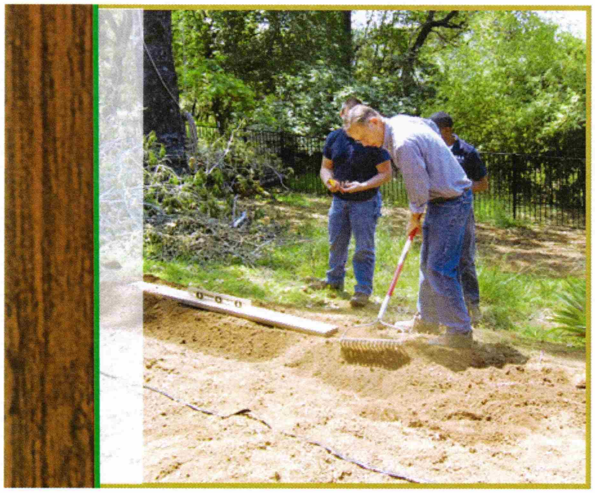


Step 2:



Step 3:

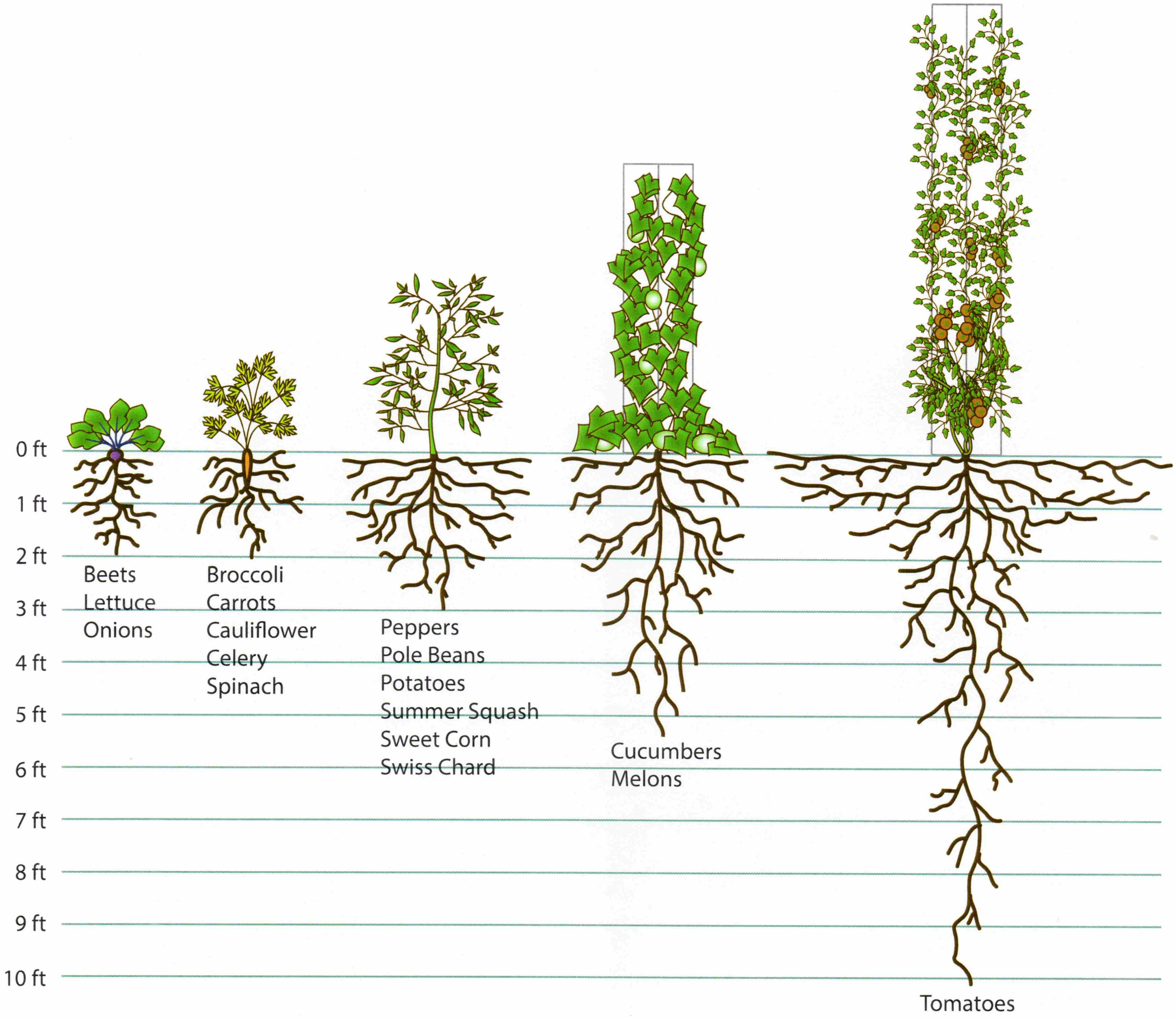
Step 4:



Step 5:

CONSIDERATIONS:

When forming your rows, it's important to note how much space the roots of your plant are going to need for optimal health and production. The following illustration shows the average breadth and depth of roots for different kinds of vegetable plants:

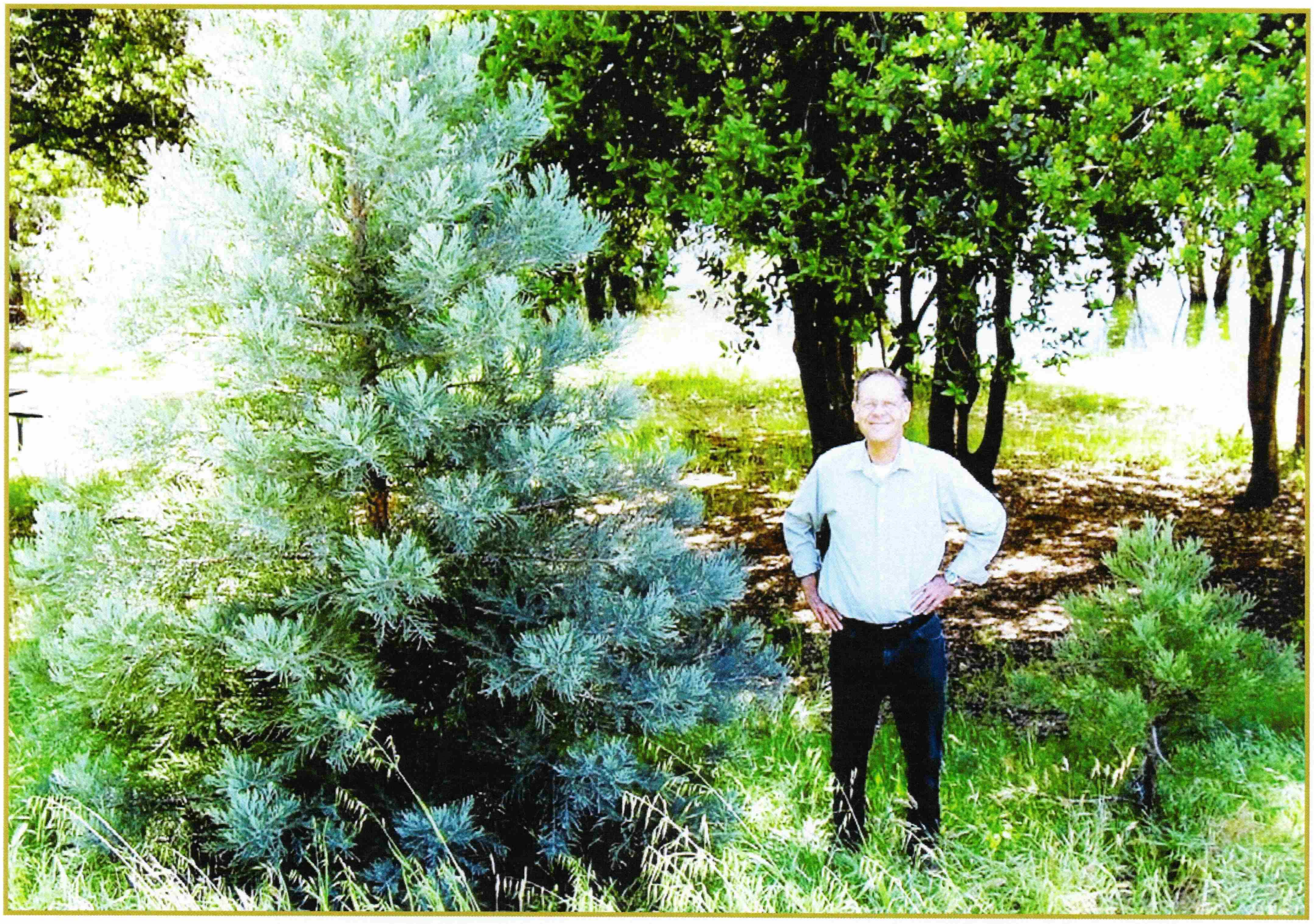


CHAPTER TWO

GARDENNG METHODS

- The Ellen White Planting Method
- High Brix
- Ocean Water
- Growing in Pots
- Jared's Formula
- Transplanting
- Planting Seeds

ELLEN WHITE PLANTING METHOD



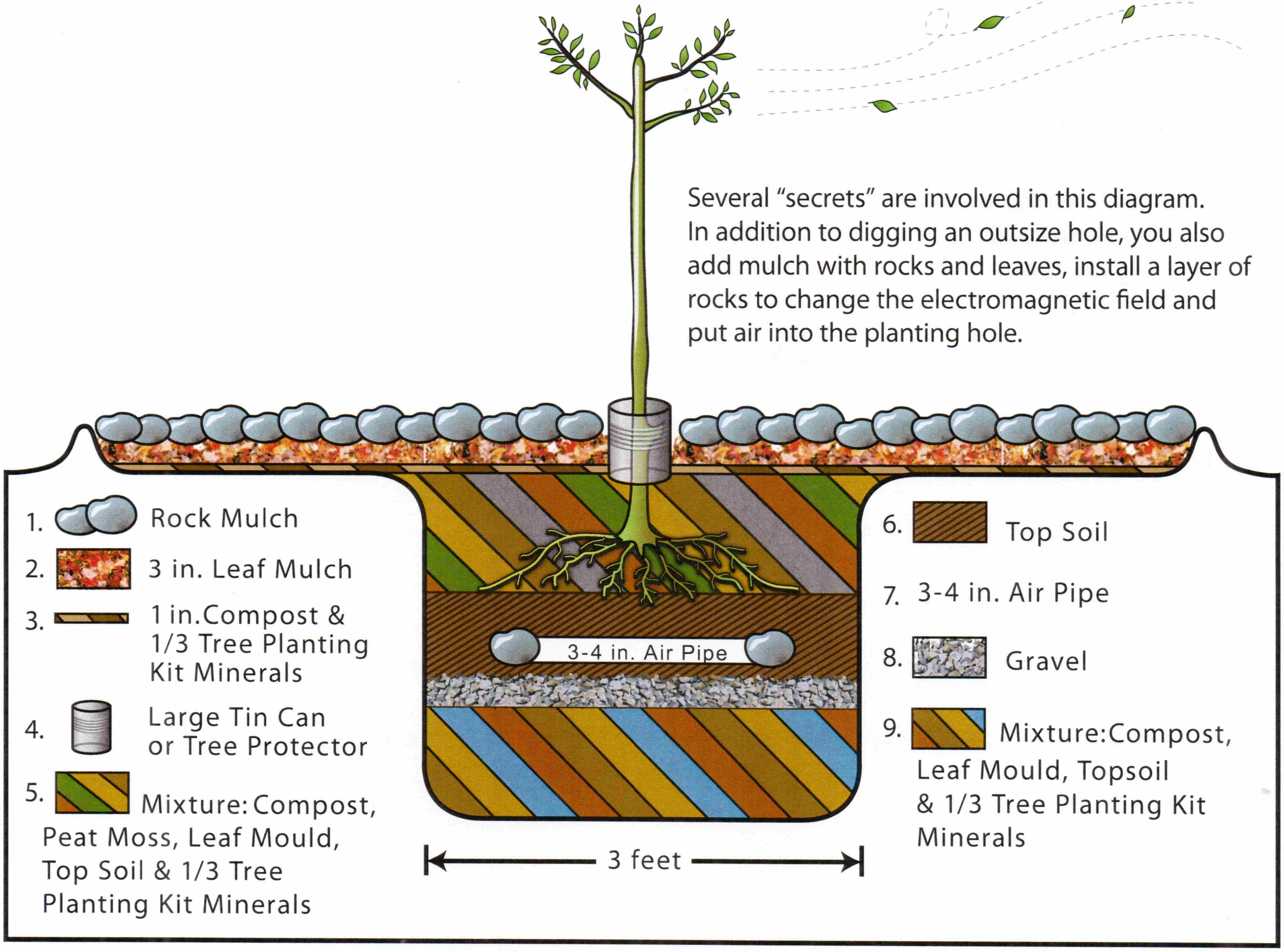
Six Sequoia trees were planted the same size, on the same day, and in the same soil. The tree on the left was planted the Ellen White Method and the tree on the right (plus the other 4) were planted the regular Forestry Department Method. All of these trees were about three years old in this photo.

RESULTS OF THIS METHOD:

- Healthy large growth.
- Abundance with high Brix.
- Feed as recommended from the soil test.

RESOURCES:

Selected Messages Vol 3 p. 328, Ellen G. White
"Are You What You Eat?" H.E. Kirschner, M.D. and Herbert Clarence White, A.B. (out of print)
"Planting by the Blueprint" DVD, Lynn Hoag


1. Rock Mulch
2. 3 in. Leaf Mulch
3. 1 in.Compost & 1/3 Tree Planting Kit Minerals
4. Large Tin Can or Tree Protector
5. Mixture: Compost, Peat Moss, Leaf Mould, Top Soil & 1/3 Tree Planting Kit Minerals
6. Top Soil
7. 3-4 in. Air Pipe
8. Gravel
9. Mixture:Compost, Leaf Mould, Topsoil & 1/3 Tree Planting Kit Minerals
3-4 in. Air Pipe
3 feet

Several "secrets" are involved in this diagram. In addition to digging an outsize hole, you also add mulch with rocks and leaves, install a layer of rocks to change the electromagnetic field and put air into the planting hole.

This planting method is Divine Wisdom. We don't know all the reasons it works and I could never come up with this method on my own - BUT IT WORKS!

Deep digging and layers of top soil, rock powders, compost, rocks, etc. go together to create healthy and abundant growth. The layer of rocks changes the electrical current in the soil and helps the roots to grow.

You may want to consider planting deep rooted vegetables and trees this way, and watch in amazement. We planted a tomato plant this way and it produced just over 100 lbs. of tomatoes. The stock was thick and strong and the tomatoes were larger than normal.

NOTE: Plant tomatoes about 8 feet apart with this method. Give them plenty of room to grow on a strong trellis - not a cage. Sea salt and the kelp are already in the tree kit minerals. The minerals are added based on your soil test or without a soil test they are based on your rain fall

INSTRUCTIONS:

1. Gather Materials:
    - 1 Tree Planting Kit (order at www.suncountrygardens.com)
    - Large tin can or tree trunk protector
    - 6 cubic feet of compost
    - 6 cubic feet of leaf mold
    - 1 bale of peat moss
    - 10 gallons of rock or gravel
    - 10 ft. length of gopher wire (optional)

2. Dig a hole 3 feet wide and three feet deep, separating the topsoil from the subsoil in different piles on the sides of your hole.

3. Fill the bottom 1 foot of the hole with a mixture of:
    - 3 cubic feet of of topsoil
    - 3 cubic feet of compost
    - 3 cubic feet combined leaf mold and peat moss
    - 1/3 of the contents of the tree planting kit

4. If needed, wrap the gopher wire inside the 3 foot hole and wire edges together. It's important not to leave any gaps.

5. Next place a layer of small rocks. (2-4 inches thick)

6. Place a 3 inch by 2 feet pipe on top of the rock and plug ends with stones.

7. Fill the next 1 foot layer with pure top soil.

8. Now plant your tree in the hole. It should be planted slightly elevated because the soil will sink over time, sometimes as much as 6-12 inches.

9. Fill the next 1 foot layer with a mixture of topsoil, compost, leaf mold, peat moss, and 1/3 of the tree planting kit minerals. Leave gopher wire at least 4 inches above soil.

10. Protect the tree trunk with a large tin can or rigid plastic protector.

11. Spread the remaining 1/3 of the tree planting kit minerals in a circle 9 ft in diameter around the tree.

12. Add mulch on top, place about 1 inch of compost and then 3 inches of leaves.

13. Place a layer of rocks on top of the mulch. (optional)

14. Using sub-soil, create a burm around the tree approximately 9 to 10 feet in diameter to hold water and fertilizer.

15. Water as needed.

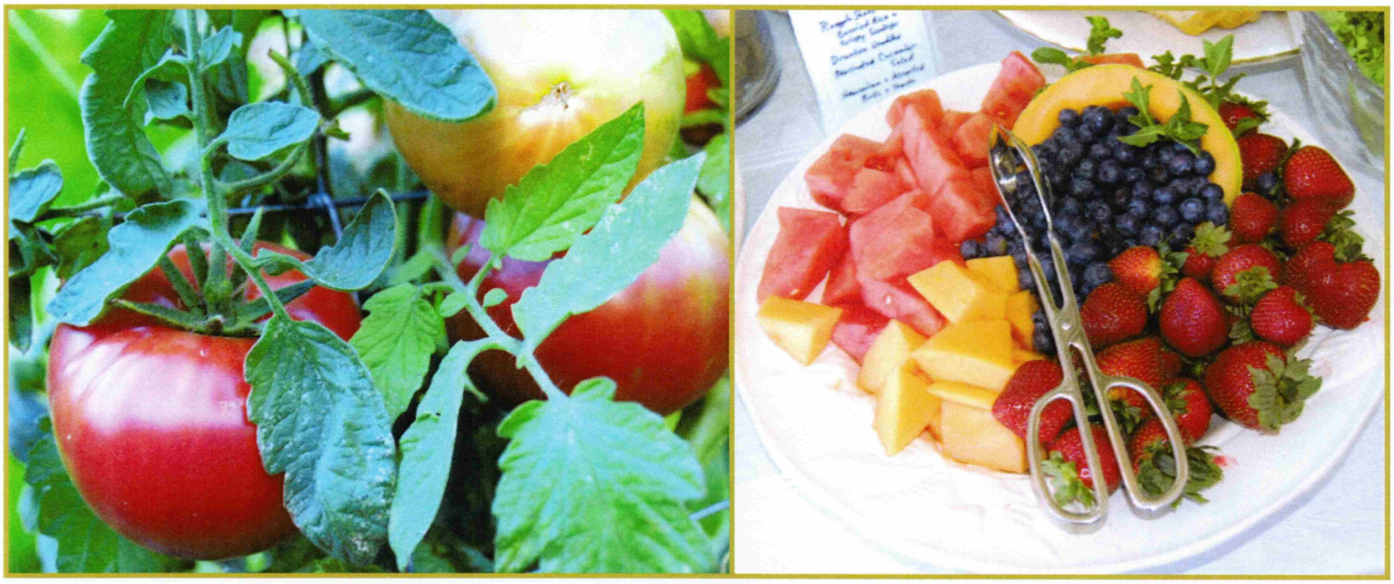
HOW TO GROW 100 LBS. OF TOMATOES ON ONE PLANT:

100 pounds of tomatoes from one plant. (compare to average of 6lbs per plant per year at a tomato farm).

- Test and balance your soil according to the directions on page 3-6.
- Use the Ellen White Tree Planting Method as described on the previous page.
- Mix your topsoil with the ingredients listed in the instructions of your Tree Planting Kit.
- Add a mulch around the tomato plant that extends out in a 5 foot circle all around the plant. Keep mulch at least one (1) foot away from the stem of the plant.
- As a bonus to your plant, plant a cover crop the year before such as soybeans, clover, alfalfa, vetch, etc., in a circle at least 15 feet in diameter in your planting area and turn it under. A tomato plant's roots will grow that far in well prepared soil.

Use this method for any plant that you want to grow to record size and productivity. The record for a Better Boy tomato plant grown this way is over 300 lbs. of tomatoes and 27 feet tall.

HIGH BRIX



What is Brix?

Brix is a term invented by Dr. Carey Reams to describe and measure the density of dissolved minerals in plant juices. The higher your Brix level, the healthier your food is. A refractometer will measure this, but your sense of taste will also tell you if the Brix is good or poor.

Dr. Carey Reams started International Ag Labs to test the soil and provide custom blend fertilizers to balance it. Phosphate (from soft rock phosphate) is a main ingredient in these custom fertilizers, because it must be the carrier for all the nutrients going into the plant except nitrogen.

Nitrogen + Potassium = Large Produce + Fast Growth = Poor Nutrition

Most methods of growing pour on the nitrogen and potassium, which equals large produce and fast growth with low Brix food. This food has very poor taste. We want to give our plants the right amount of everything they need to grow in order to produce the healthiest, best tasting food.

HOW TO GET HIGH BRIX:

- Get a soil test with recommendations and balance your soil. Refer to the soil test order form on page 2.
- Balance the soil with the recommended fertalizers
- Feed the plants regularly as per the recommendations of your soil test with custom blended fertilizers, nutrient drenches and foliar feedings through the leaves.

RESULTS OF THIS METHOD:

1. Food that tastes wonderful. You may even find that some foods you don't like (for me eggplant and peppers) are now quite delicious.

2. Nutrient levels of food are very high. These are foods that heal, foods that keep you healthy and energized; super-food.

4. Much less insect pressure on your plants. I still have some insect pressure in my garden but it's far less when the plants are fully nourished.

5. Animals also prefer these high nutrient foods. They will bypass other gardens to get to yours so you need good fencing.

6. Your plants, when grown this way, will also give you a few degrees of frost protection. We had a fuji apple tree that kept right on growing in the winter snow.

7. My experience is that produce grown this way is not necessarily bigger or more pounds per acre, but it is more pounds per bushel (heavier) superior food. This is the best food that can be grown, you cannot buy this food anywhere.

COMPARISON CHART FOR BRIX READINGS

PLANT	POOR	AVERAGE	GOOD	EXCELLENT
Alfalfa	4	8	16	22
Apples	6	10	14	18
Asparagus	2	4	6	8
Avocados	4	6	8	10
Bananas	8	10	12	14
Beets	6	8	10	12
Bell Peppers	4	6	8	12
Blueberries	6	8	12	14
Broccoli	6	8	10	12
Cabbage	6	8	10	12
Cantaloupe	8	12	14	16
Carrots	4	6	12	18
Casaba	8	10	12	14
Cauliflower	4	6	8	10
Celery	4	6	10	12
Cherries	6	8	14	16
Coconut	8	10	12	14
Corn Stalks	4	8	14	20
Corn, young	6	10	18	24
Cow Peas	4	6	10	12
Endive	4	6	8	10
English Peas	8	10	12	14
Escarole	4	6	8	10
Field Peas	8	10	12	14
Grains	6	10	14	18
Grapefruit	6	10	14	18
Grapes	8	12	16	20
Green Beans	4	6	8	10
Honeydew	8	10	12	14
Hot Peppers	4	6	8	10
Kohlrabi	6	8	10	12
Kumquat	4	6	8	10
Lemons	4	6	8	12
Lettuce	4	6	8	10
Limes	4	6	8	12
Mangos	4	6	10	14

PLANT	POOR	AVERAGE	GOOD	EXCELLENT
Onions	4	6	8	10
Oranges	6	10	16	20
Papayas	6	10	18	22
Parsley	4	6	8	10
Peaches	6	10	14	18
Peanuts	4	6	8	10
Pears	6	10	12	14
Pineapple	12	14	20	22
Raisins	60	70	75	80
Raspberries	6	8	12	14
Rutabagas	4	6	10	12
Sorghum	6	10	22	30
Squash	6	8	12	14
Strawberries	6	10	14	16
Sweet Corn	6	10	18	24
Sweet Potato	6	8	10	14
Tomatoes	4	6	8	12
Turnips	4	6	8	10
Watermelon	8	12	14	16

OCEAN WATER

Demonstration garden at Placerville, CA SDA Church. Ocean water row second from right.

Why We Need Minerals

"All life is electrical. Each cell is a little battery; it puts out a current. Deprived of this function, because of a nutrient shortfall or a marked imbalance, the cell dies and deprives the living tissue of its services. It is minerals like those found in the perfect ratios in ocean water which allow for healthy electrical activity in living cells." ("Sea Energy Agriculture", Maynard Murray 1).

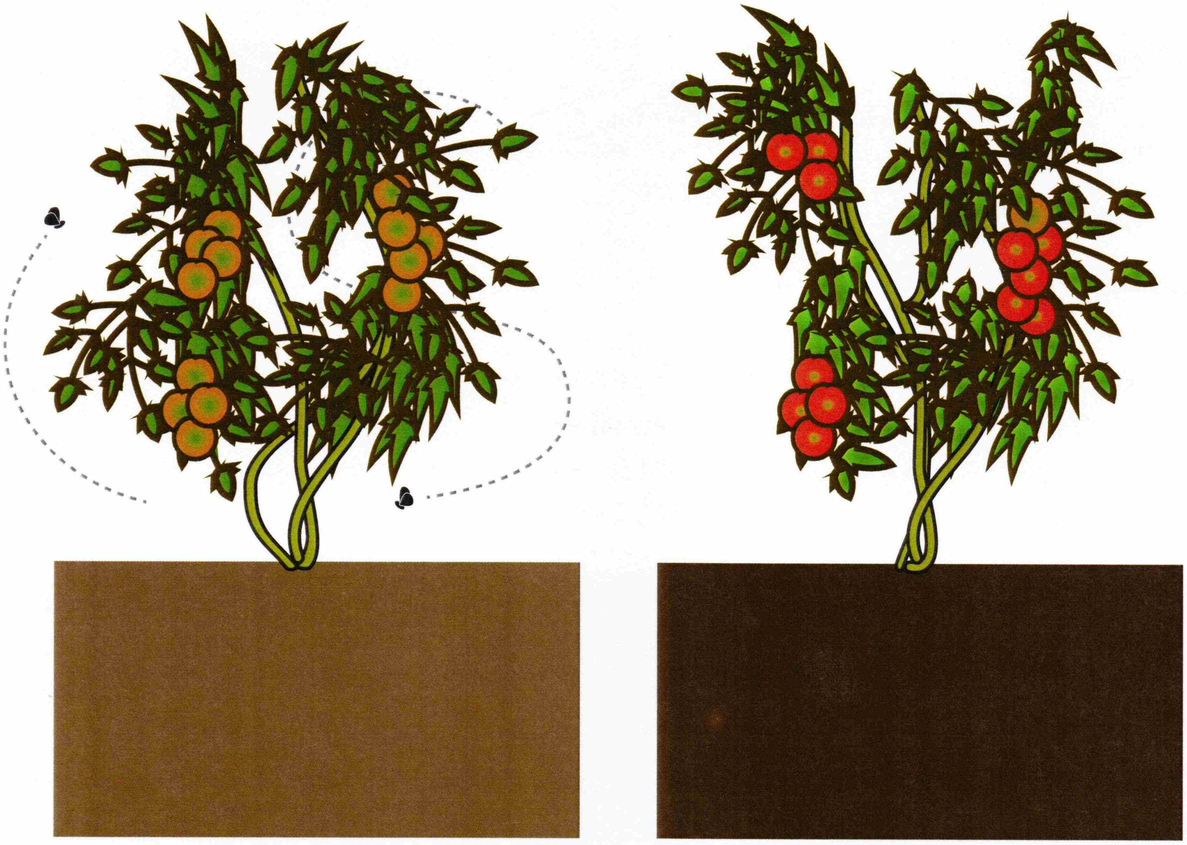
Because cells depend on the right nutrients, it is very important that we provide them in the right balance in order for our gardens, animals and ourselves to be healthy. Using ocean minerals is the best way for us to achieve this perfect balance. On the land, there can be plants in two different locations that are considerably different in growth and nutrition. However, in the ocean the same minerals are in the same percentages everywhere, so you don't have the kind of deficiencies that we commonly see on land.

In contrast to what we see on the land, plants and animals that live in ocean water don't suffer from diseases much at all, and only when there is a pollutant in their water such as agricultural chemicals. There are places in the ocean where we've done atomic bomb experiments – like in Bikini Island for instance – and so there are animals there that have problems like diseases. Other than these types of cases though, living things in the ocean, such as trout, salmon and other cold water fish, live much longer and are bigger (up to 2.5 times larger) than the same species which live in fresh water. So from what we see in plants and animals that live in the ocean, there are a lot of advantages to having the balance of minerals that exists there.

Disease Prevention

About twenty elements are known to have specific roles in human physiology. Several more are known to have beneficial effects on the physiology of plants and animals. Even heavy metals such as lead, silver, gold, cadmium, mercury, and aluminum are necessary in small amounts for our health. There's a suspected positive role in even known poisonous elements such as arsenic, if they're ingested in the organic form and in trace amounts. So we need these elements for our bodies to function properly.

These minerals are very important in the enzymes that the human body creates. For example, only a few of the enzymes have had their necessary trace elements identified. Only around 9 trace elements are listed under recommended dietary allowances. However, since thousands of enzymes have been identi-



REGULAR WATER	OCEAN WATER
- Lighter color soil	- Darker color soil
- More stressed plants	- More vibrant plants
- More insects	- Fewer insects
- Lower BRIX	- Higher BRIX
- Poor taste	- Great taste

fied, there are thousands more enzyme trace elements - joint functions remaining that must be isolated and described.

When our cells divide, if they don't have all the minerals they need, then we get what's called a disease of dilution. In other words, the cell creates another cell, so half of these minerals go here and half go there. Then it divides again and half goes here and half goes there. If we're not replenishing them, then we're getting less and less and less of certain minerals. And that comes out as malfunctions in people, animals and plants.

Necessity for Organic Minerals

It is best for our bodies for us to get our minerals from our food. In an organic state, minerals have been combined with carbon dioxide from the air in the plant's leaves. In an inorganic state, these minerals are toxic. Salt, for example, is considered to be toxic, especially in large amounts, yet sodium chloride which is tied up in fruits and vegetables is perfectly tolerated even by those on a low salt diet. In other words, when it's in an organic form, a mineral that may normally be toxic is not going to harm you at all. So you could eat all of these minerals that you want in plant foods and be safe. There is a lot of salt in our body; we would die quickly without it. Our blood is salty, our sweat, our tears – they're all salty. And we need that salt in our body, but it needs to come with the other nutrients that balance it in order to be healthy for us. It also needs to be in the right proportion, as little as five teaspoons of salt taken at one time would kill you.

Disease Prevention in the Garden

Using ocean water on our garden not only provides us with the proper nutrients to keep us healthy, but it keeps our plants healthy, too. It's possible to grow plants with almost no disease and with tremendous resistance to insect damage. If we have all of these minerals which are in the ocean water, in that right balance, it actually builds immunities to harmful pathogens. When we build up our immunities by having the right nutrients, then both viral and fungus infections in plants are greatly reduced and maybe eliminated.

Now, sometimes a plant won't need a particular mineral to grow healthy, but whoever eats that plant – human or animal – might need that mineral to be healthy. So we want to grow our plants with all these minerals, because the purpose for them is to be eaten by us or by animals.

Why Our Soil is Depleated

We've had 4,000 years of leeching and farming where we lose these precious mineral elements. We need rain in order to water our plants, but over time it causes leeching – the carrying of minerals out of the soil. Now where we've plowed the soil and where the soil is bare, there's more leeching than in the forest right next to these areas. This is because in the forest we have thick mulch, and it's more able to absorb that water and take it down and not have it run off. This is not to say that we should use mulch in our gardens to try to fix the problem of leeching, but it is important that we replenish our soil with the right nutrients.

How to Use Ocean Water in the Garden

First, it is very important to dilute the ocean water 10 to 1 - ten parts fresh water to one part ocean water. Do not drink the ocean water, let the plant take up the nutrients, and then eat the plant.

By adding ocean water you are adding, in a consistent balance, all the elements in the periodic chart you studied in high school chemistry class—except some of the gases. If you now add nitrogen and phosphate - and iron if your soil is depleted of it - you will have an ideal fertilizer in a perfect blend. This will create very healthy produce.

RESULTS OF THIS METHOD:

1. Long shelf life. Food grown this way does not seem to rot, it may dry out but does not seem to spoil.
2. The Brix rating is not necessarily higher, but the taste is excellent. Ocean water makes carrots sweet and crisp and tomatoes with exceptionally good flavor. Peaches and nectarines have an exceptionally good flavor also.
3. Healing properties: Food grown with this method and fed to animals or people has a healing effect.

INSTRUCTIONS:

- Dilute 1 oz. of unrefined sea solids (may be purchased on our website) with 2 1/2 gallons of fresh water. Or if you collect your own ocean water, then use 1 quart of ocean water to 10 quarts of fresh water. (Collect ocean water without any trash or seaweed. Stores forever if covered.)
- Use diluted water in your garden four to six times per growing season. 2 1/2 gallons of ocean water solution is enough for a 1,000 square foot garden.
- For peach leaf curl: Drench leaves and stems and allow mixture to drop on the ground for roots. Repeat after one week.

CAUTION: OCEAN WATER USE IN AGRICULTURE IS EXPERIMENTAL. Please watch carefully and if you see signs of stress in your plants, overwater with fresh water. If you see improvement and health in your plants then you are doing something right.

Collect clean ocean water in gallon jugs. Do not collect ocean water from a bay; the water will be out of balance. Do not collect any seaweed in your ocean water, it will spoil the water.

RESOURCES:

"Sea Energy Agriculture" by Maynard Murray, M.D.

Purchase from Acres U.S.A. www.acresusa.com

GROWING IN POTS

The Problem with Growing in Pots

It's always best to have plants grow with plenty of room for the roots to spread out and capture as much nutrients as they can. But, growing in pots can sometimes be necessary when there isn't enough room. There are a lot of people who live in apartments and the only room they have is a balcony, but we can still grow good food there as well.

Growing in pots creates a special problem, because when we put our regular soil into pots, there's a lot of clay along with it. Clay will expand when it gets wet, and then contract when it dries out and shrink away from the sides of the pot. Then when we water, it'll actually be running down the sides of the ball of clay in the pot rather than soaking intot he soil. Water starts running out from the bottom and it's all over the top, so people think "Oh, I've watered enough," and will water less than actually is needed. And often, if you were to take that soil out of the pot and cut through it, you'd find that the soil in the middle is dry. So this plant is going to be trying to live off of the little bit of moisture that's on the top and the sides of the soil, and we can't get really good growth that way.

Regular Potting Soil & Aeroponics

So what people do in order to grow plants in pots is make potting soil, which has a lot of organic material in it, and often a lot of pearlite because pearlite is light and fluffy and holds water then releases it to the plant as is needed. And while foliage will grow nicely this way, my experience with this is that if you're trying to grow food plants, you're going to get very poor quality. You can still grow plants, but it's like using a hydroponic system of growth in the soil. And at this point, I haven't found any hydroponic, aeroponic or aquaponic system that grows quality nutrient dense food.

Aeroponics is the fastest way we know of to grow plants, because the more air we get to the roots without drying them out, the faster the plant will grow. But we're feeding the plant only the minerals we're giving it directly, not via feeding the microbes and the mushoom plants in the soil, which could feed the roots in the way they were meant to be fed. Aeroponics works after a fashion, but all the food I've had grown with that method has been low BRIX, low nutrition, and it just didn't taste good. Some people love it because it's fresh and they can go out on their porch and quickly pick something and put it in a salad, but the food is deficient.

Last year I did some experiments because the aeroponics method does grow so fast, thinking "Maybe there's a way we can get enough nutrients to these plants that they turn out high quality." My experiments absolutely failed; we did not see very good results. We did get good results with biochar, but not with aeroponics.

JARED'S FORMULA

A man named Jared Thurmon, from the Georgia area, developed what we call Jared's formula. It's the best formula I've found anywhere for growing food in pots. Above are some photos I took of plants grown using potting soil and Jared's formula. Now, the plant planted in regular soil had a head start (left), and was twice the size of the Jared plant (right) but now, after about 4 weeks, it has caught up and exceeded the growth of the first one.

Jared is one of the owners of Bee Hive Ministries, which has orphanages, schools and other ministries all over the world. Jared and his wife spent a lot of time & money perfecting this formula. His hope & intention was that the profits from the sale of this superior potting mix should go to support his orphanage in Haiti.

Once we were satisfied with the formula and the results it produces in plants, we could not figure out and a way of marketing it that made sense except to have it manufactured locally from local products. (It's not practical or economical to ship dirt long distances around the country.) So the decision was made to freely give away the formula, and ask in return that if you make any improvements to it, you freely share those with us so that everyone can benefit.

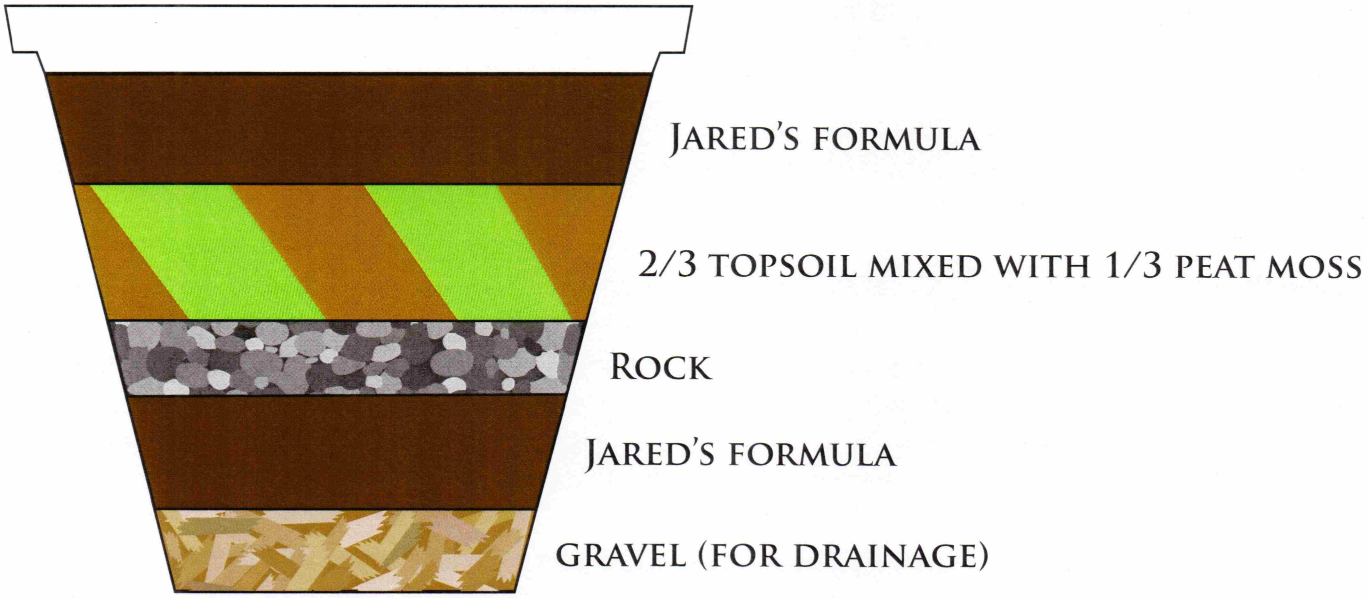
If you wish to contact Jared, email him at
thurmon@gmail.com

Formula Recipe:

12 quarts Peat Moss
12 quarts Worm Compost
1/2 quart Gypsum
1/4 quart Molasses
2 quarts Alfalfa
1/4 quart Kelp
1/128 quart SEA-90 Minerals
(Thats is 1/4 oz or 1/2 TBS.)
1/2 quart BioChar

Combining Ellen White's Method & Jared's Potting Soil

We're doing some other experiments right now where we're planting in pots using the Ellen White planting method. In this diagram you can see the process we are using. Wood chips at the bottom are important to **help drain out the water, and the layer of rock in the middle helps alter the electromagnetic field and provide increased growth to the plant.**



Prior to Jared's formula, I saw an experiment that Ian Jones did while teaching agriculture at the Weimar Institute. Ian took enough good fertile soil to fill 2 identical pots. The only difference between the pots was that one had a layer of small stones 1/3 of the way from the bottom. This mimics the Ellen White planting method for trees on a smaller scale.

The two pots were filled and then planted with radish seeds. Three weeks from the planting, there was a significant difference in growth, with the mini Ellen White planting pot showing bigger, healthier plants.

TRANSPLANTING

A transplant formula is particularly beneficial for this method (see suncountrygardens.com for information). The transplant formula, if you can get it, is a powder that has the right nutrients, the right microbes and dormant mycorrhizal fungi spores in it. Those microbes and fungi will come alive when they get water, food, air and the right temperatures - and will then feed your plants. This is the easiest and simplest way to transplant. If you can't get transplant formula, make your own by using worm castings, some compost and a bucket of water. Mix it up and it will turn into a nasty looking brown water, but it will be really good for your plants.

If you're making your own transplant water, make the hole for your transplant and put anywhere from a pint to a quart of that water into it (depending on the size of your hole). Transplant into the hole after you've put the water into it.

If you have the powder formula, mix that in with the dirt at the bottom of the hole, add water, then add the plant. Now I want to stress adding water to the bottom of the hole first. Some people will mix the transplant formula in, put the plant in, then water like crazy on top. Often the water won't reach down to the plant's roots when doing it this way, but if you put the water in the bottom first, then you know that your plant has enough water at the roots. If you also want to water after planting that's okay, but make sure your plant's roots have water first.

After you put your plant into the transplant hole, push relatively dry soil around it. Press gently on the soil then leave it alone. If you work your soil too much, you will end up making a mud brick and destroy the soil's structure. If this happens, it will take a whole year to get that structure back, and it will be harder for your plant to grow.

PLANTING SEEDS

DIRECTIONS:

1. Make your row with a trowel, your hand or a hoe. Some plants, such as beets, carrots and bush beans, should be planted in double rows. Corn should be planted in blocks - 4 short rows, side by side, works well.

2. Pour water in the row.

3. Lightly dust the row with transplant formula.

4. Plant according to instructions for that seed. Firm the soil over the seeds lightly after planting.

5. Tiny seeds such as carrots, lettuce, mustard, etc. may be planted easier by mixing the seeds with sand in a cup or can. Take a handful of sand and a packet of seeds, and mix them together. In a downward throwing motion, plant your rows. Gently cover with 1/4 inch of soil.

6. Seeds, if overcrowded, must be thinned. If the plants are overcrowded they will be weak and prone to a greater chance of disease. Your plants need room to feed their roots; for sunshine and air circulation. Give your plants room, be ruthless in thinning.

Before

After

Planting Seedlings (front of greenhouse) and seeds (in back).

CHAPTER THREE

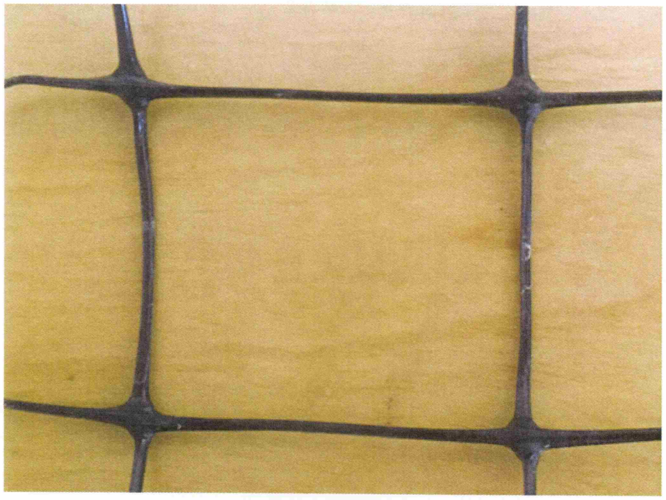
MAINTENANCE

- Deer Proof Fencing
- Gophers & Rodents
- Non-Poison Methods
- Trellis for Climbing Vegetables
- Sprinkler System Using T-tape

DEER PROOF FENCING

Deer are a menace that will raid your garden. When they find out that the produce in your garden tastes better than your neighbor's, they will bypass all of your neighbor's gardens to get to yours.

You can go to the hardware store and buy what's called "deer and bird fencing", but that does not work because it's too light. You want to get a heavier material, as you can see here:



This image is to scale. The fence gaps are approximately 2 inches.

There are lots of different fencing methods to stop deer from getting into your garden. An inexpensive one that seems to work is a fickle-fence (shown above). I like this fence because it's much less expensive and easier to put up than metal fencing. The method we use for fickle-fence is to use tall T-posts. Pound the T-posts into the ground so that 6 ft is above ground, and place them 10 feet apart from each other. Attach the fickle-fence by plastic zip-ties to the T-posts on the *outside* of the garden and have the upper edge of the fence even with the top of your T-post. The fickle-fence is 7.5 feet tall, so that means the last 1.5 feet will be laying on the ground, outside your garden.

When you come to the corner, you will have to split the bottom of the skirt at that corner so that it goes around it. Having the skirt of the fence heading away from the garden helps so that when animals come up to try to get under it, they won't be able to slip through. If a deer gets his nose under your fence, he can easily wiggle his way in. But what happens is when he comes up to a fence with a skirt, he'll stand on it. This confuses deer because they can't get under it. Now, the first year you might want to put some rocks or boards around the edge so that it stays flat, but after that the grass and the weeds will grow there and it will be almost impossible for animals to get underneath it.

Now a deer can easily jump six feet, but they will not jump into a small area. If we had a garden that was 10 feet wide and 50 feet long with only a 4 foot tall fence, the deer will not jump into that. They're afraid of being trapped and they need a place from which they can run and jump.

So, let's use that same principle and suppose we're fencing in a bigger area – such as 5 acres. Within the first 10 feet, or preferably 8 feet from the outside fence, put in a crop that requires trellises - such as grapes or berries - running parallel to the outer fence. Deer will feel that this is a double fence and they will not jump into it. You don't need an 8 foot tall fence, deer can potentially jump 8 feet anyway, just make sure that your garden appears to be a confined area.

MATERIALS NEEDED FOR 40 FOOT x 30 FOOT GARDEN:

1. 150 feet x 7 feet of Fickle Fence -- to order, visit www.suncountrygardens.com
2. 14 eight foot tall T-Posts
3. Fence stake pounder
4. PVC Pipe to make a gate
5. Ladder
6. Plastic zip ties
    - Design your garden fence with a gate for easy entrance. You usually want your gate to be at least 4 feet wide. In our example above, we have placed the gate in the middle of the longest side.
    - Starting at a corner, pound in an 8 foot metal T-post. Measure 10' from that fence post and pound in the next one, etc. until the fence posts are all in place.
    - Find a friend to help tie the fence to the stakes with zip ties leaving the excess laying on the ground going away from the garden.

MAKING A SIMPLE GATE:

1. Build a frame with PVC Pipe and simply tie fence securely to frame leaving one side open. Design a simple latch with rope or PVC.
2. A deer can easily jump a 6 foot or 7 foot fence, however they will not jump into small enclosures. That is why this size garden needs only a 6 foot tall fence. A smaller 10 foot x 20 foot garden would only need a 4 foot fence to protect it.
3. Don't give the deer a clear area to jump into. Install your trellises inside the garden to block the deer.

GOPHERS & RODENTS

In many places on earth we have problems with rodents such as gophers in the garden. Gophers are a huge problem for us unless we control them or get rid of them. They'll eat up your whole garden and all the work that went into it. They are especially fond of root crops such as potatoes. You may think your potato crops are just about ready to be harvested, and then you dig them up just to find out the gophers got to them a week earlier.

They'll also eat crops like tomato plants. I've been in a garden where I watched a tomato plant shudder then slowly disappeared into the hole as a gopher ate it. It started with the roots and then just pulled the whole thing under. And of course by the time you see it shudder it's already too late, it's eaten up the plant's roots. Gophers will eat a lot of other types of plants too.

Now there's also a rodent called a mole in the garden that we don't need to worry as much about. It only eats worms and grubs. So, while we don't like him eating our earthworms, we can be okay with letting him be, because he won't touch the plants. The gopher on the other hand is a vegetarian, so he's in competition with us.

SOLUTIONS:

Trenches

Now where gophers are a big problem, and you got a fairly large sized garden, often we can use a trencher. We'll trench down about 2 ½ feet and then we'll use a fine wire mesh– no larger than ¼ inch holes – to create a barrier in the ground all around the garden. The wire mesh should be between 24 to 36 inches tall. What we do is put this gopher fence in about 18 to 20 inches, with the last 4 to 6 inches sticking up out of the ground.

Now, when the gopher hits an obstacle such as your fence, we know his habit is to come up to the surface because he's looking for roots to eat and the deeper the gopher goes, the less roots he will find. He'll dig up to the surface but won't be able to climb over the fence you've made – so you've kept him out successfully.

If by some chance he gets in, such as if someone steps on the fence and bends it down to where he can reach, or if he builds a mound of dirt right by the fence, large enough for him to plop over, you have to be very aggressive in getting him out. You'll need to use bait, poisons or whatever you can to make sure he gets out otherwise he's trapped in that garden. When gophers are as young as 6 weeks old they can breed and have a litter. In that litter there may be 3-6 new gophers. They multiply a lot faster than we can get rid of them. And when you're growing a garden full of great food out there, they'll multiply like crazy. So don't try to just grow more food to compensate for what they've eaten – you're just growing more gophers.

Cement Walls

Another thing that we can do is make solid cement walls in the ground around your garden. They will need to be deep enough so the rodents can't dig under it. You'll need to go about 3-4 ft underground. Now, a gopher can easily dig deeper than that, but it will typically stay in shallow ground. If you dig down to a bedrock, and have your wall go down to that bedrock that would be ideal.

You also want it high enough so that the gopher won't climb over it. Gophers, being ground animals, won't climb very high. If your walls are 6 inches above the ground, that should be enough. This works for gophers but not for squirrels, as squirrels can easily climb over it.

For these cement walls, you want to make sure there are absolutely no gaps in your wall. If you have a gap of even ½ inch, the gopher can create a way through. What I like to do when making this cement is use cement wire. That way it holds things together even if the cement breaks due to the weathering.

Castor Oil

Nurseries often sell castor oil for castor bean pulp, for gopher control. This is poisonous to rodents. Follow the directions on the product.

Cages

If you have severe pests like ground squirrels or birds then above this cement you can build a cage that will keep these critters out. With this format, underground you'll essentially have an enormous pot, except it will be so big that you don't have the problems you get with pots. And above ground it will be covered by a cage. So you can grow a lot of food this way in most areas if it's well protected.

If we did this in a place like Northern California, we would use a very fine netting to keep the butterflies and moths out. That would mean that anything we grow inside of this area would have to be pollinated by hand. You can put mason bees or bumble bees in there; they do a great job of pollinating. However, honey bees will not survive in a closed area.

Even with this netting, you won't keep aphids, mites and spiders out. But you could put lacewings and ladybugs in just like we do in the greenhouse so that we have a balanced ecosystem. The ladybugs will eat the aphids and the lacewings will also eat the aphids. It depends on what you need to keep out and how much insect pressure your garden has.

What does not work well for gophers?

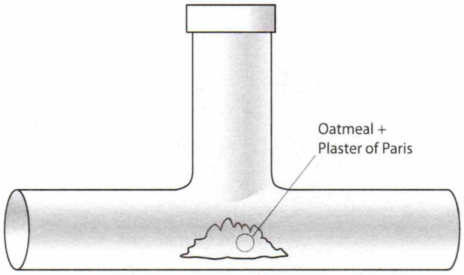
Shooting, trapping and poisoning work some, but not permanently. Deterrents with noise, lights and smells are just as temporary. Little sound bells or vibrations to scare off gophers will keep the gophers away for some weeks before they realize – "That's a dinner bell!" Dogs and cats will works sometimes but not consistently.

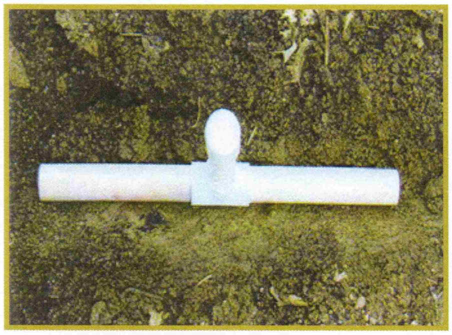
I've also come across combustibles like the Gopher Getters, which use an oxygen and propane. What we do is find the gopher's main tunnel and stick the propane and oxygen tube in there, and then light it on fire. Suddenly you've got gophers and dirt flying everywhere – and you've done your rototilling at the same time. It works but, again, it requires continual use. And we don't want to use this method when we've already got a garden growing.

NON-POISON METHOD

FOR GOPHERS, GROUND SQUIRRELS, VOLES & MICE

Now we don't want to put poisons in the soil. If you do then you disqualify your soil as being organic, and also risk your plants and your own health. One thing we can do is use a T shaped pipe trap and put oatmeal in it. The formula is 50% oats and 50% Plaster of Paris. You put the oats and plasters down through the hole on the top – where you can open up the cap. It's easy to replenish.



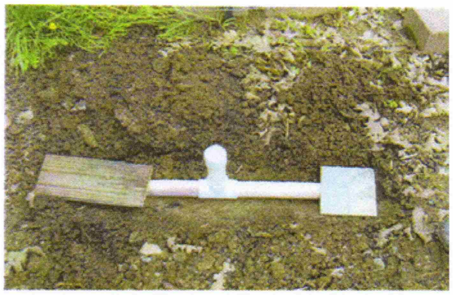


Neither the Plaster of Paris nor the oats have any poisons in them, but that little critter will get in there and eat it, and when these two mix in the stomach, they will harden into a ball due to the moisture and kill the rodent. I've found it to be very effective, especially against ground squirrels.

Now, if need be, there are actual poisons you can buy at the nursery. I would suggest traps that have a block of poison inside a plastic box. These traps are designed so the rodent has to eat the poison inside the box and can't carry it outside. I sometimes use those in the garden, even though they have poison, because this way the poison won't go out it into the garden itself. In one form or another, we absolutely have to control these critters; otherwise we won't get a usable crop.

Materials Needed:

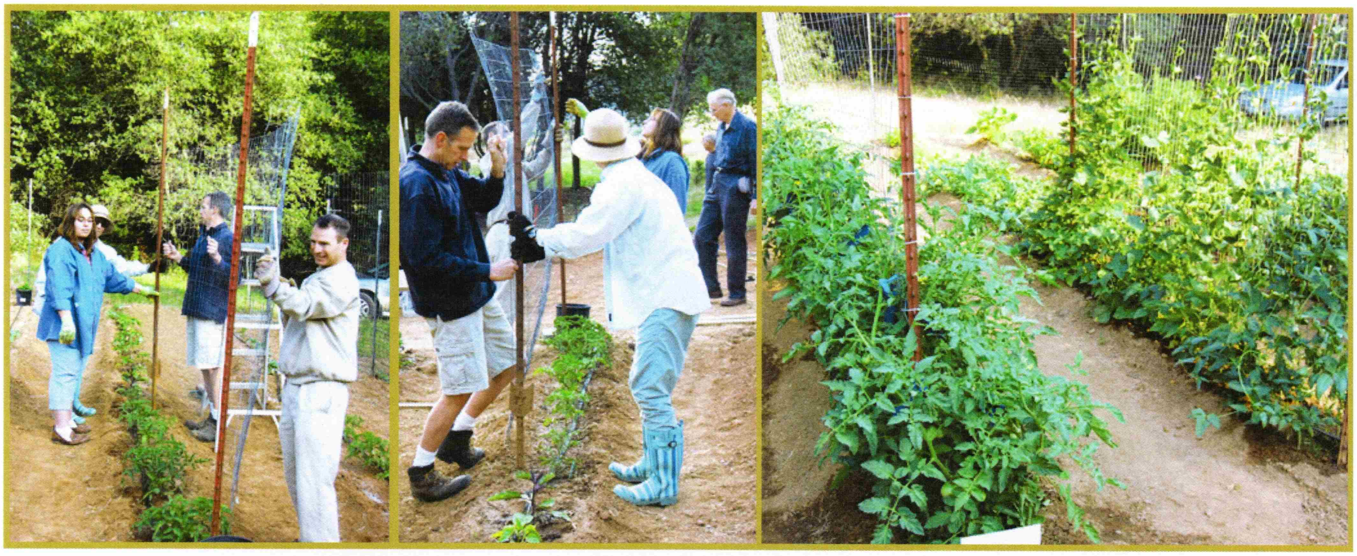
- 2 inch PVC pipe with a T in the middle
- Cap for T section of pipe
- Mixture of 50% oats and 50% Plaster of Paris



DIRECTIONS:

1. Fill the pipe with mixture of oats and Plaster of Paris.
2. Place a cap on the opening of the T on your pipe.
3. Dig out a section of the gopher tunnel and place the pipe in.
4. Cover the ends with short boards, then cover over with dirt close to the top of the T.

TRELLIS FOR CLIMBING VEGETABLES



We need to keep things like tomatoes and cucumbers off the ground. When they're off the ground they're cleaner, bug-free, and they're not nearly as likely to rot. For instance, if I grew an acre of tomatoes and I didn't stake them, and I grew another acre with trellises, I'd probably get 10 times more useful tomatoes out of those with the trellises. It's that big of a difference.

What I like for trellises are metal fences that have a fairly big opening of 4 to 6 inches. You can get this in deer fencing, but I don't like the Fickle-Fence for trellising because the holes are too small. Unlike the protective fence which goes to the ground, the trellis is elevated about 6 inches above the base of the plants. The reason for this is because you need to be able to get underneath the trellis to fertilize and weed.

If you use a 6 foot tall metal fence, cut it to whatever length you need and then put it 6 inches above the ground. This will make the top of your trellis 6 ½ feet tall. Most of us can reach that height comfortably and pick a tomato, a cucumber or beans, so this is a good height. You want 4 to 6 inch gaps in your fence so you can reach through to pick produce growing inside the trellis.

Now, if you have T-posts, you should put them every 5 feet apart. The reason for this is the wind is going to come in, especially in the fall, and these trellises will be heavy with plants. So if you get a big wind, your trellises could blow right over. It's important to reinforce the strength of your trellises so that this doesn't happen.

I like for my trellises to be about 10 feet long. You can make them the length you need to, but 10 feet is comfortable for me personally. So for 10 feet, you need 3 T-posts. Make the fencing wrap around the outside and use plastic zip-ties to connect it to the posts. Building your trellises this way allows you to easily take them down when the season's over, and remove the posts in order to rototill the ground again.

If your setup allows it, then after about 6.5 feet high you can add a horizontal trellis so your plants can keep growing horizontally. This makes it easy to pick the food which will be hanging down.

MATERIALS NEEDED FOR 5 ROWS 10 FEET LONG:

- 50 foot long x 6 foot high metal fencing with 4 inch to 6 inch grid
- 15 8 foot metal T-Posts
- Fence post pounder
- Zip ties
- Heavy garden shears
- Metal shears
- Ladder

DIRECTIONS:

1. Cut fencing into 5 pieces, each 10 feet long. Pound a metal T-Post on either end of 10 foot rows and one T-Post in the middle.
2. Hang the fencing on the metal T-Posts, wrapping around a few inches on each end. Tie it to metal posts with zip ties. **IMPORTANT:** Hang fencing 6 inches off the ground.
3. After all the fencing is in, cut off loose zip tie ends.

TIP: The pictures above show only two metal T Posts per row, but we found the plants grew so large, that the fence started sagging. Tomato cages are too small for 100 lb. tomato plants. We also found that green beans grew so large they crawled over the top of the fencing and down the other side, becoming so thick and crowded they did not get enough sunlight.

SPRINKLER SYSTEM USING T-TAPE

For irrigation in the garden I like to recommend T-tape. It's a black strip of plastic which expands into a little hose when you connect it to your water source. Every so often this hose will have dripper holes and you want to align your dripper holes to the plants in your garden. You can lay it on top of your garden rows or dig them underground – whichever you'd prefer. The T-tape allows for an even spread of water across your garden, and with a timer you can control how long you want to have the water run. It makes watering your plants a lot easier and more efficient. It's very inexpensive. It was invented in Israel, where they use every drop of water and have nothing to spare. So you're not using more water than you need.

Timers

Now, you want to make sure to turn it off at the right time. You don't want to water so much that it goes into the walkways. If the walkways remain dry, you'll have far fewer weeds and it'll make your gardening easier. To do this, you can buy timers that are battery operated for under $35. We all get busy and have things to do, so a timer can take care of your plants for you even when you're away from home.

You may only need to have it on for 15 minutes a day, but the time may be different depending on the weather you experience. As we get into the heat of summer, it may take as much as an hour a day.

You can get T-tape with drippers every 4 inches, 6 inches, 12 inches, depending on how far apart you need them. For vegetable gardens I like to have drippers every 4 inches because that way we can water all the small plants as well as the larger plants.

The T-tape will stay on the ground for the whole season, but you should take it out at the end. If you live in a very dry area, you can bury the T-tape so that the roots of your plants get the water and none is lost to evaporation. Whether you bury the T-tape or keep it on top of the ground, the drippers go up. This is because the T-tape is designed to keep the drippers clean and unclogged.

For professional help, call: Drip Works (888) 471-3606

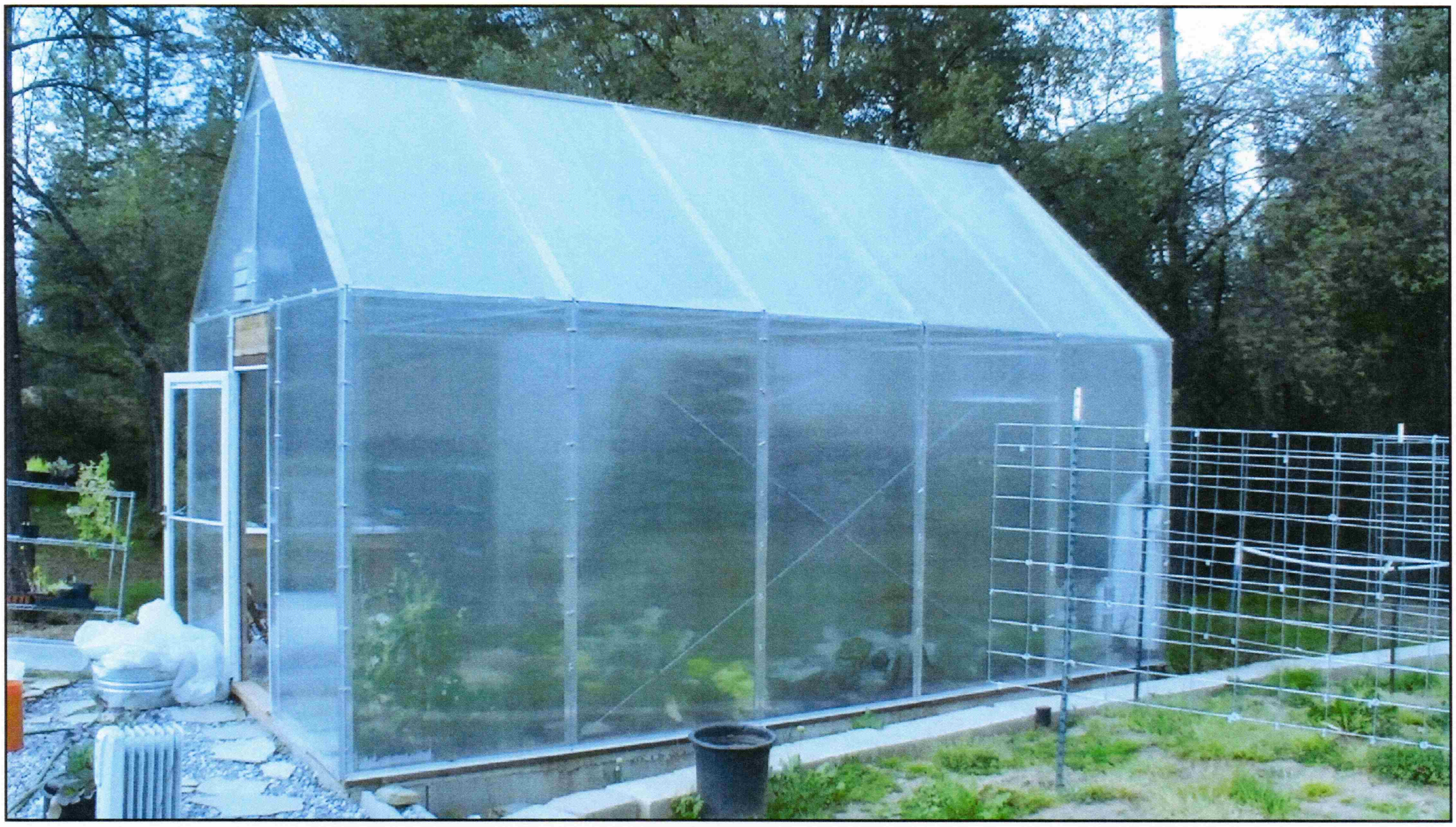
CHAPTER FOUR

YEAR ROUND GARDENING

- The Omega Greenhouse
- Water Canopy Greenhouse
- Screen House/Greenhouse Combo
- Do-It-Yourself Backyard Greenhouse
- Simple Hoop Houses

THE OMEGA GREENHOUSE

For pricing check our website: www.suncountrygardens.com



We need to eat year round—not just three to four months when the garden is in full production. For most families, a combination of the 20' x 12' Omega Greenhouse with an outdoor garden and possibly a temporary Hoop House, will be able to grow and have abundant fresh food all year round.

By studying principles from the Bible, principles and instruction from Ellen White's writings, and carefully observing nature, we came up with a house like no other on Earth. The key to food self-sufficiency is a properly used 20 foot x 12 foot Omega Greenhouse. This is not a typical greenhouse with typical greenhouse problems.

WHAT YOU CAN EXPECT:

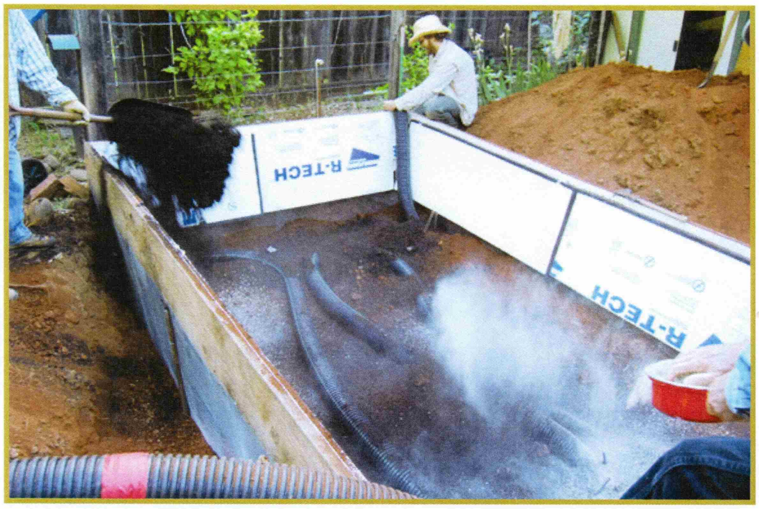
- It is engineered and designed to be a warm growing house in the winter and cool in the summer.
- It is extremely strong and will withstand 90 miles per hour winds.
- Holds 40 lb. per sq. ft. snow loads and could easily be increased in strength for extreme conditions.
- Side and roof panels are light weight. It can be easily taken down and stored for summer and just as easily re assembled when cold weather threatens.

EXAMPLE:

Dig your planting hole 3 feet deep and the size of your greenhouse. It is important to separate the top soil from the sub-soil. (Notice the two piles of soil on either side of the hole.)

Next, the hole was lined with foam insulation board. This is supported with wood or hardyboard. Hardware cloth is stapled to the outside of the wood as a rodent barrier.

A 4 inch French Drain pipe is placed on bottom of hole about 2 feet apart leaving one end of the pipe hanging out of the top and one end on the opposite side. This will provide heating and cooling and air to the roots and microbes.

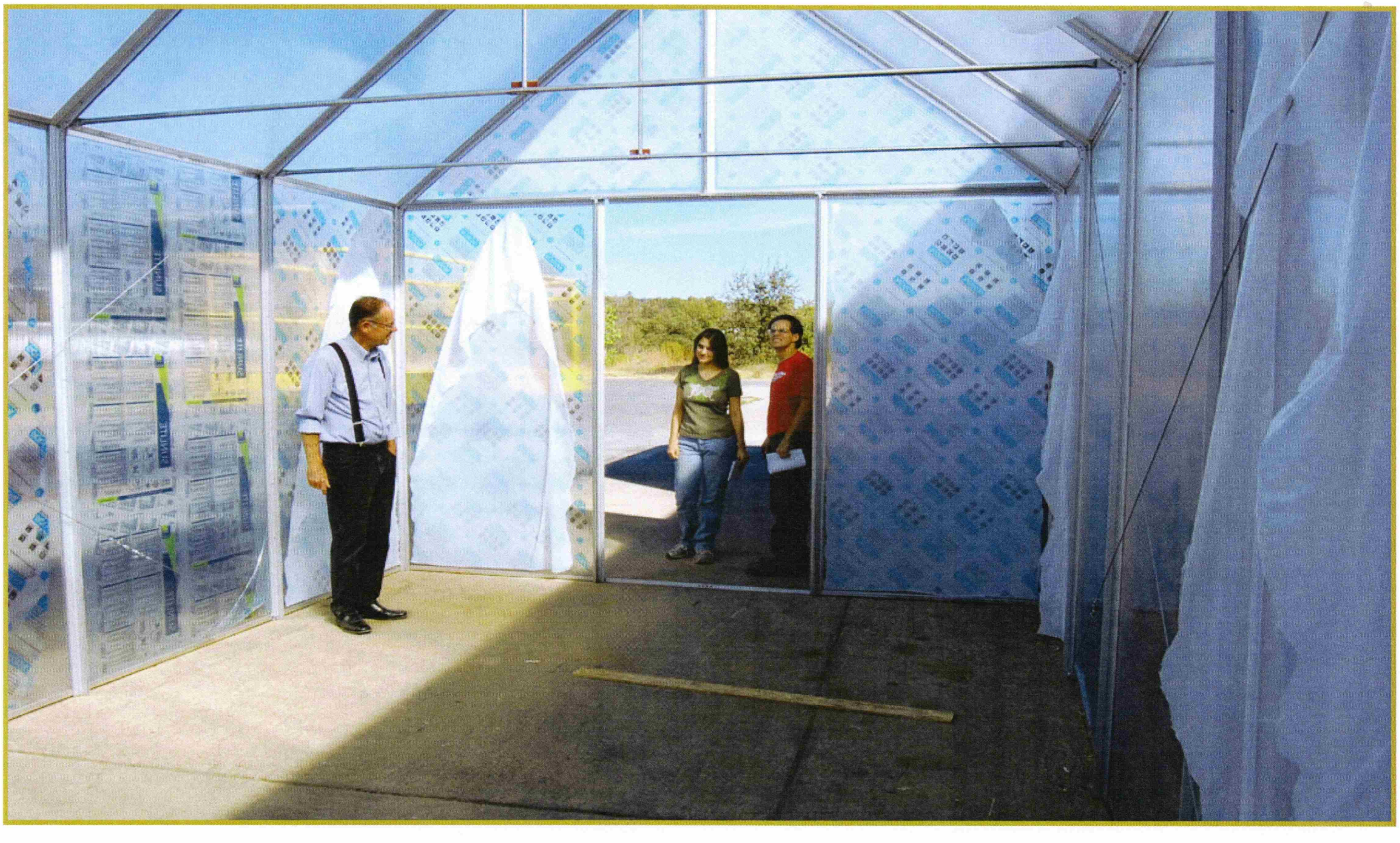


Add amendments. See the instructions on planting with the Ellen White Method.

1st layer is one foot of amended soil.
2nd layer is 4 inches of rock.
3rd layer is one foot of top soil.
4th layer is one foot of amended soil.

Another installation is pictured at right with the prepared soil and a poured cement foundation.

12' X 20' X 13' high Greenhouse



The greenhouse is first built at the factory then taken down for delivery.

Installing the first greenhouse in Brownsville, CA.
It rained and almost snowed all the way there then stopped until we finished.

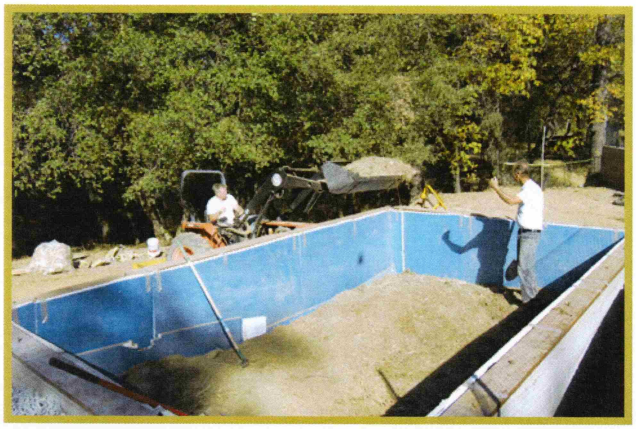
PREPARING THE SOIL FOR OMEGA GREENHOUSE:

1. Choose a spot facing South with full sun. Measure out the foundation with measurements from the factory for the size of your greenhouse. Example: For this 20 feet x 12 feet greenhouse, the foundation was 20 feet 8 inches by 12 feet 6 inches.

2. Lay the gopher wire overlapping the length of the foundation. Seal and staple the overlap.

3. Line the walls with insulating foam. We used 2 inch scrap foam we had on hand.

4. Fill in layers with the Ellen White Planting Method.



OUR APPROXIMATE MATERIAL COSTS:

FROM THE FOUNDATION-DOWN, NOT INCLUDING ABOVE GROUND STRUCTURE.

DESCRIPTION	PRICE
Cement block (250)	$402.50
Rebar (16)	$112.00
Cement (104)	$282.00
Sod Staples	$20.00
3” Drain 90-2	$10.00
3” Grate	$2.00
3” French Drain Pipe 100’	$110.00
3/200 Sock	$40.00
Gopher Wire 200’	$220.00
Top Soil	$330.00
Rock	$150.00
Automatic Window Vents	$400.00
Labor (U Turn For Christ)	$600.00
Custom Blended Fertilizers	$250.00
Total	$2928.50

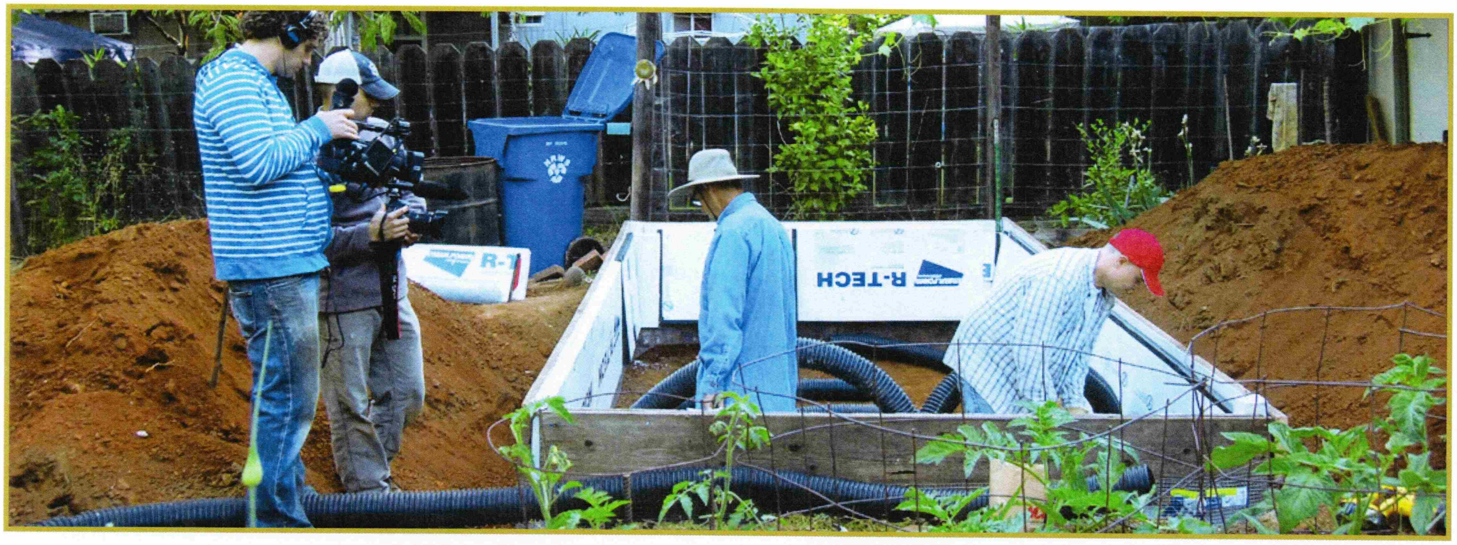
BUILDING THE HOUSE ABOVE GROUND:

We started around 2:30 pm and it started to get late. I informed everyone we had about an hour to finish.

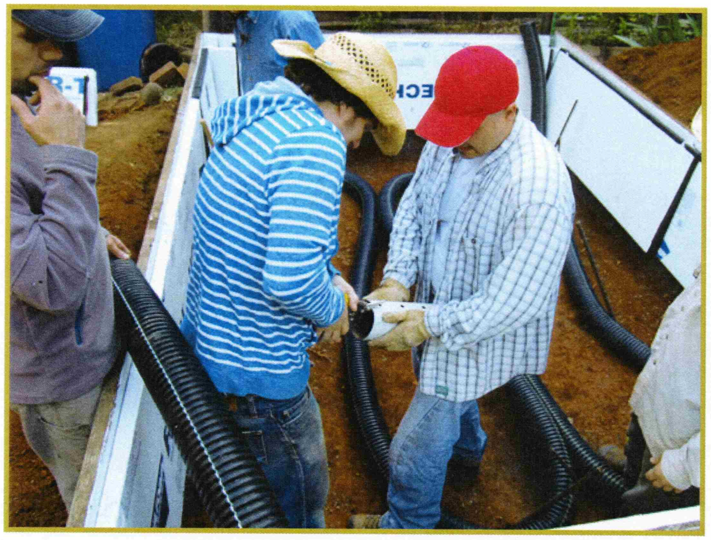
Anthony, the owner, said not to worry. He would install some lights and we were not leaving until the greenhouse was up.

He wasn't kidding. We finished around 6:00 pm and went inside for some hot chili and sandwiches.

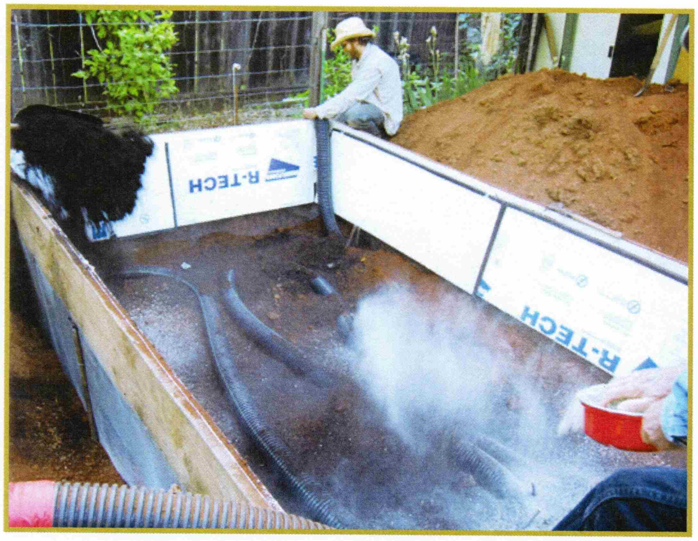
DO-IT-YOURSELF GREENHOUSE



1. Decide the size of your greenhouse then dig a hole 3 feet deep separating the top soil from the sub soil. This can be done by hand or with a backhoe.



2. Install a 4 inch French Drain Pipe in the bottom of the planting bed snaking it around about 2 feet apart and leaving the pipes open at the top on opposite ends.



3. Start layering the planting bed using the Ellen White Planting Method.

a. For the first one foot, mix top soil, custom blended fertilizers, compost and leaf mold.

b. Next, spread 2 to 4 inches of gravel or rock.

c. On top of rock, spread 1 foot of regular top soil.

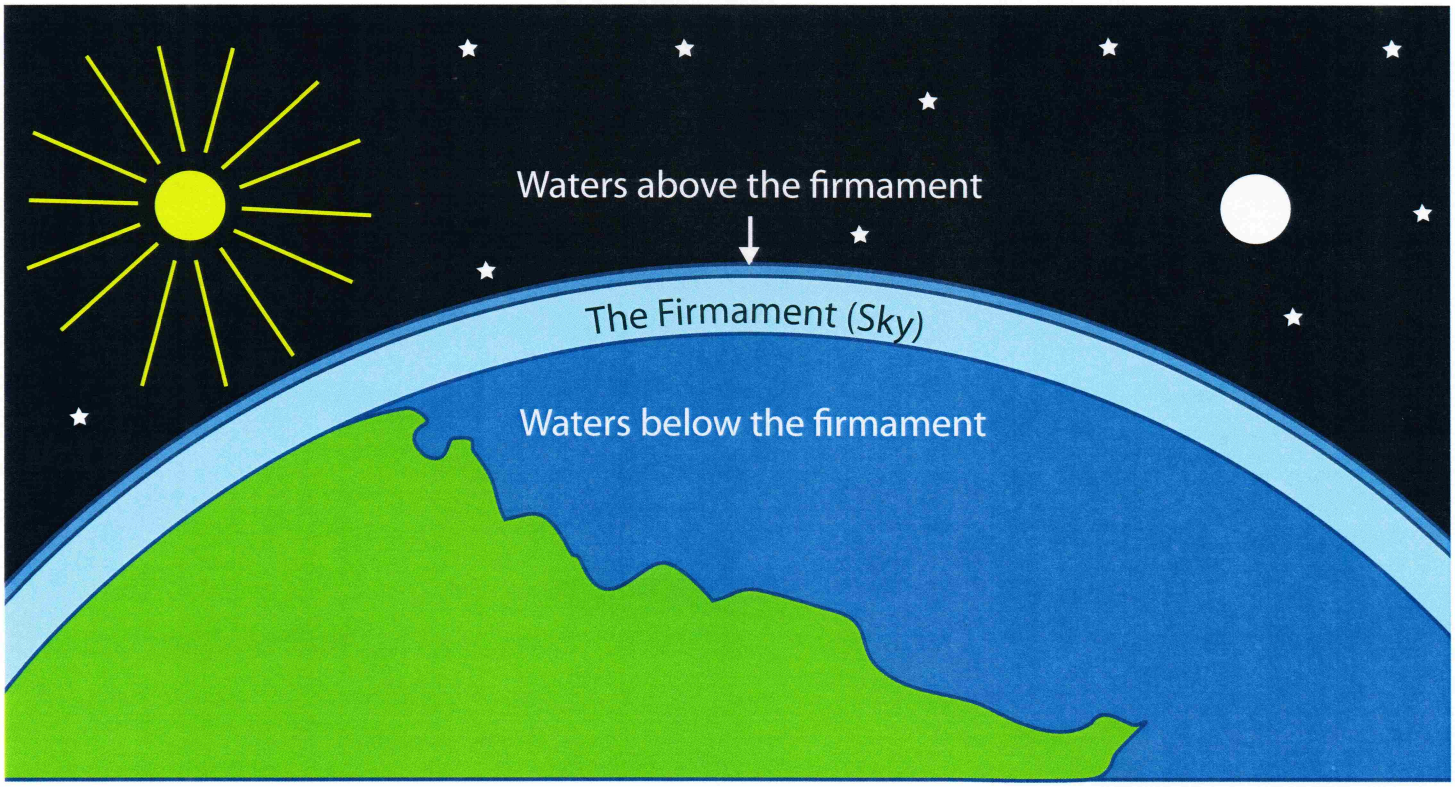
d. Spread last 1 foot with top soil, custom blended fertilizers, compost and leaf mold.

WATER CANOPY GREENHOUSE

Philosophy:

The idea of the water canopy greenhouse originally comes from the book of Genesis chapter 1, verses 6 and 7. On the second day of Creation, God said "Let there be a firmament". The word 'firmament' means 'air'. The verse goes on to say, "Let there be air in the midst of the waters, and let it divide the waters from the waters. Thus God made the air and divided the waters which were under the air from the waters which were above the air." We also know from Genesis that it did not rain on this Earth from the time of Creation to Noah's flood. The rivers came out in one huge spring in the Garden of Eden, then divided into four rivers and went out into the whole Earth. The rivers flowed opposite from how they flow today. A mist also came out from the ground to water the whole face of the Earth.

From the idea of waters being suspended above the firmament – or air – around the Earth, we derived the concept of the water canopy greenhouse. We use the principles set forth in Genesis and place water above the plants so that all the sunlight coming in is filtered through the water before it reaches the ground and plants. We've found that this has several benefits; temperature control, blocking of harmful radiation, and subsequent growth of plants that can reach up to 10 times that of outdoor growth in the same location. In pre-flood Earth, there was a hyperbaric atmosphere. The result was plants, animals and men that were many times larger and more robust than any that now live on the Earth.

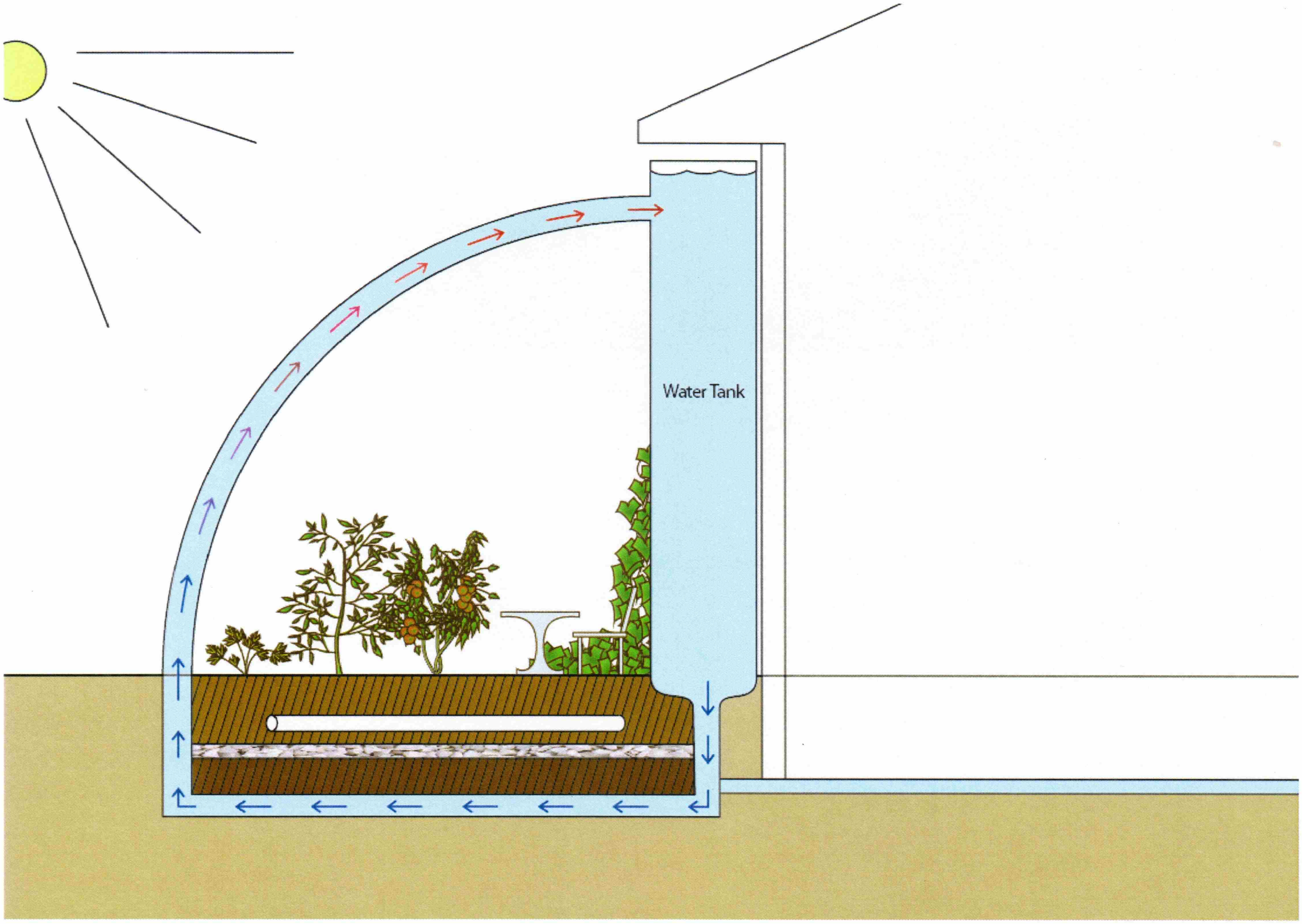


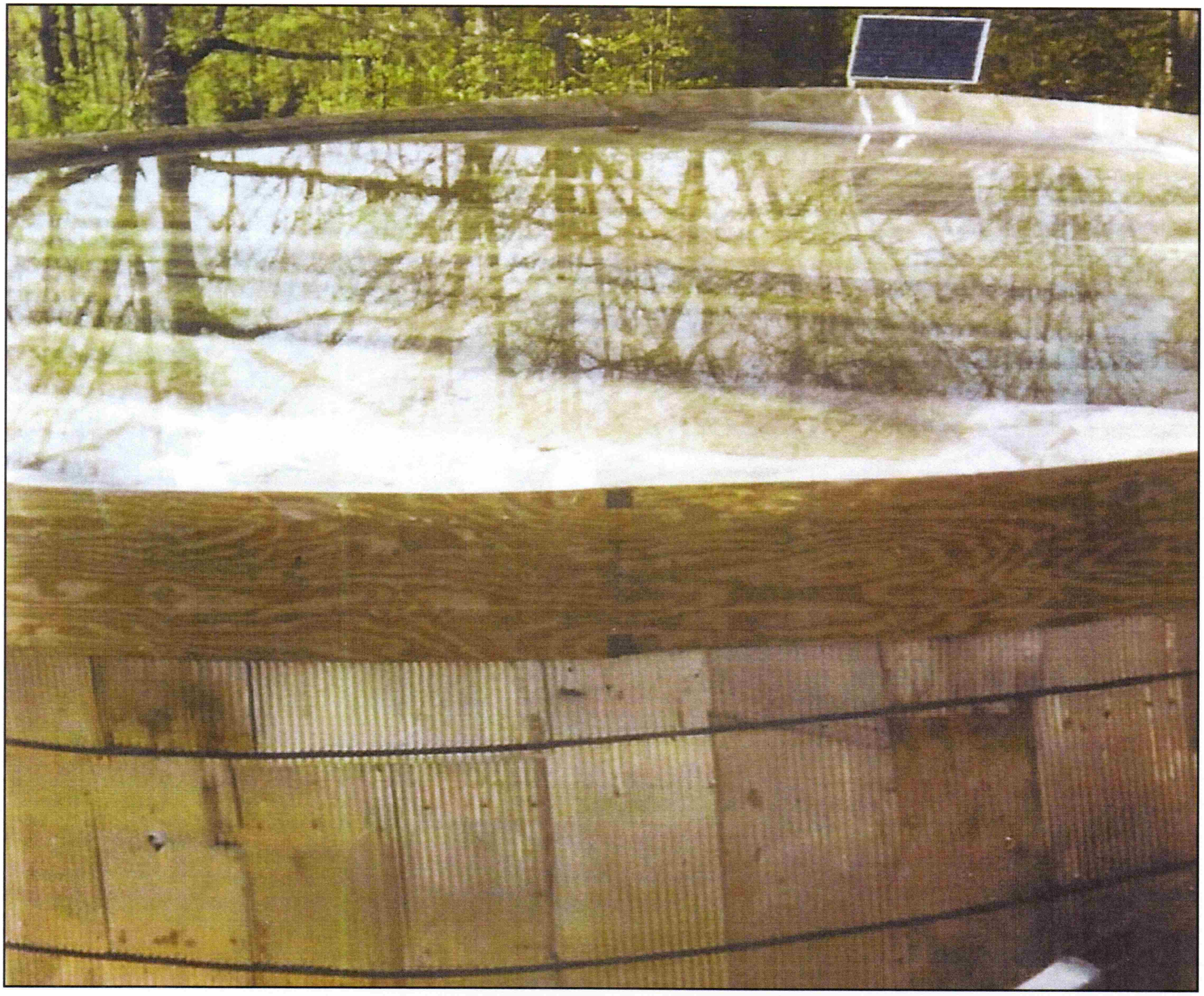
Temperature Control

With the water canopy greenhouse, the layer of water installed above traps the heat from the sun and releases it over time so that things don't get too hot or too cold. In one example, from Dr. Calvin Dence's greenhouse, when it was 15 degrees outside the coldest temperature in the greenhouse was 45 degrees. Plants thrive when they have a temperature that's between 65° F to 85° F (19° C to 31°C).

Blocking Harmful Radiation

Something else about water is that it filters out harmful rays which come from all different directions in space. To give one example of this, in power plants they use a thick jacket (10 to 12 feet thick) of water around the radioactive cores. This allows people to walk right around these cores without being harmed by the radiation. We can use this same idea to protect our plants and the delicate micro-biome in the soil from cosmic rays. This has a positive effect on our plants, being that the damage to cells from radiation causes a living thing to have to spend a lot of resources on healing rather than growing.





10x Growth

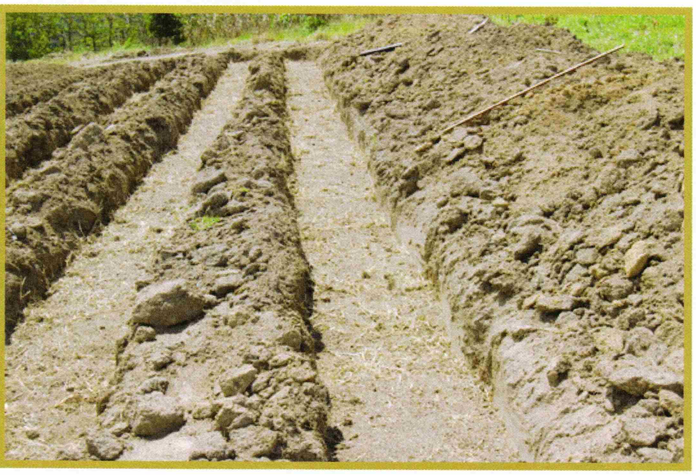
Dr. Dence's first greenhouse was 37 feet in diameter, and designed so that there were 12 inches of water in the ceiling. He built it from straw bales and put steel bands around it, using Styrofoam for the foundation. What he didn't understand at the time is that when you build one of these out of straw bale, you need to use post and beam constraints to hold the weight. Otherwise the straw bales will compress and shrink over time and the structure will become lopsided and out of level.

I kept in touch with him on a regular basis, and when I asked him what the difference between growing inside and outside was, he replied on several occasions that he thought he got about 10 times bigger and faster growth with the plants in the greenhouse than he did with the same type of plants growing just outside of it.

SCREEN HOUSE/GREENHOUSE COMBO

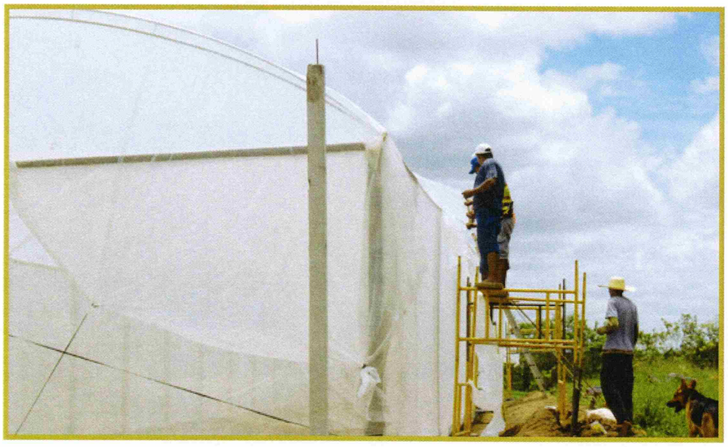
In warm locations, such as tropical places, a screen house/greenhouse combination is a good option for shielding your plants from insects and too much rain. There are a lot of problems with insects eating produce in Brazil, and this screen house helped greately to protect our plants.

Backhoe cleared spot for screen house.



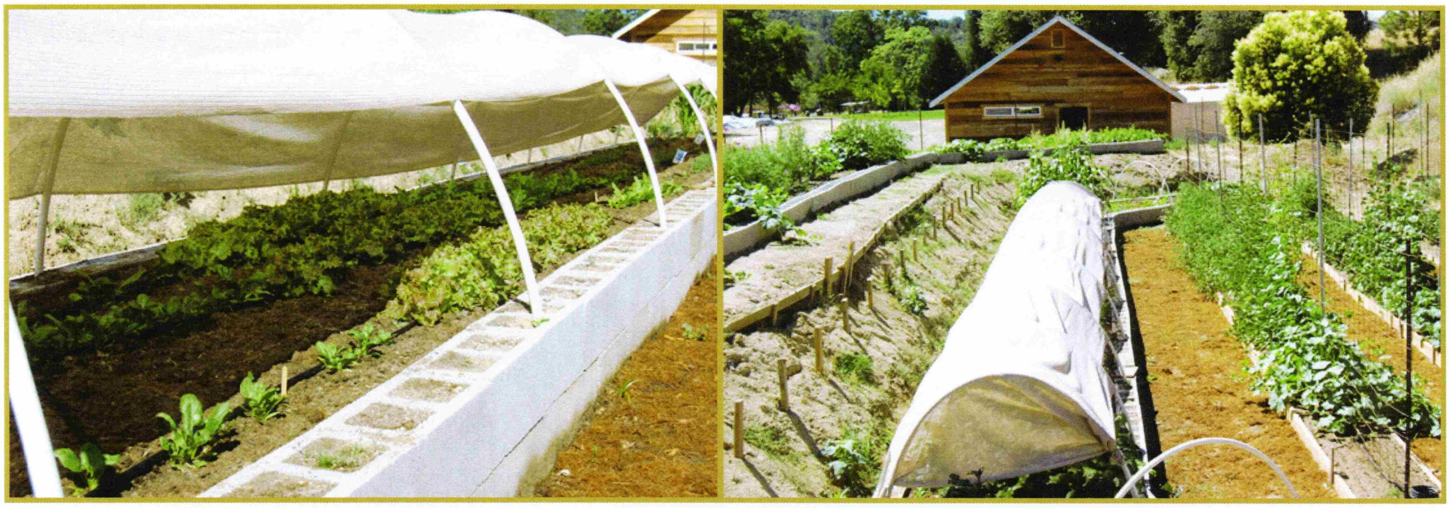
Backhoe dug 3 foot deep trenches for Ellen White planting method.

Used cement block foundation and cement posts to hold structure



Screen House: Brazil 2012.

SIMPLE HOOP HOUSES



Coloma, CA: PVC Pipe set in cement block with shade cloth. Worked Great! Could use plastic for winter crops.

Advantages of Hoop Houses

Hoop houses are quick and easy to build, and also much lower cost than a full greenhouse. It is possible to build a hoop house for $1.00 per square foot, if you use low-cost materials. There are several ways you can build hoop houses, but one of the simplest is to put metal stakes in the ground and slide sections of PVC pipe over them to create arcs (as seen above). You can then stretch plastic over these arcs to protect your plants from freezing, or use shade cloth to shade your plants.

Using sticks and leftover PVC Pipe in Brazil.

“ Planting by the Blueprint”

Update

Since recording this video, because of new discoveries and changes in agriculture, an update is necessary. We realized the need for a tree planting kit to simplify and make tree planting less expensive. So we have made a kit with all the minerals, microbes and mycorrhiza in the right proportions. It is $58.00 per kit including shipping to you. For most people it is less expensive and easier than shopping for and gathering all the ingredients separately.

To order call 530-622-4967 or go to www.suncountrygardens.com

Microbes need to eat. Aerobic and anerobic both need organic material plus minerals (rock powders) to flourish. However the anerobic microbes need to work without oxygen. It is the difference between the aerobic and anerobic microbes that cause the electrical charge and magnetic field that increases growth in plants. If we then put air in the lower layer, we are working against ourselves. Put the air pipe above the layer of rocks, not below them.

In recent years cotton has been genetically modified to take glyphosate (Roundup). We do not use cottonseed meal anymore. Instead, use any seed meal that is not GMO or sprayed with Roundup.

Some mistakes I have seen:

Planting the tree too low. The soil will sink in this planting hole the first year. Plant the tree high enough so that when it sinks it is still at or above surrounding ground level. If the tree is too low it runs the risk of sending out roots above the graft, which means you lose the advantage of a grafted tree.

Can't find soft rock phosphate so the clerk sells you super phosphate. If it is used at the same rate as soft rock phosphate it will kill the tree. Only use super phosphate at the rate recommended by the fertilizer company.

In “Planting by the Blueprint” soft rock phosphate is recommended at 10 to 20 pounds per tree planting. Use it according to need, even 20 pounds is OK for most soils since this is a slow release and does not bind up with calcium like super phosphate. If your soil has a higher phosphate level, then cut back to 10 pounds per tree planting.

Trees are babies when we plant them.they need protection from sunburn, drought, deer, gophers, rabbits etc. Fence them, protect them. When they are older they will get tough and not need so much babying.

Please do not use wood chips when planting trees.

Thank you.

For questions in the U.S. call 530-622-4967 or email lynnhoag@hotmail.com

Notes on Tree Planting

The most important agricultural principles I teach are from the Bible, the writings of Ellen White and careful observation of nature, called God's Other Book.

In my teaching around the US and other countries I have come across trees planted with only the instruction given in the following quote:

Ellen G. White Instructed in Planting Fruit Trees
"While we were in Australia, we adopted the . . . . plan . . . . of digging deep trenches and filling them in with dressing that would create good soil. This we did in the cultivation of tomatoes, oranges, lemons, peaches, and grapes.
The man of whom we purchased our peach trees told me that he would be pleased to have me observe the way they were planted. I then asked him to let me show him how it had been represented in the night season that they should be planted. I ordered my hired man to dig a deep cavity in the ground, then put in rich dirt, then stones, then rich dirt. After this he put in layers of earth and dressing until the hole was filled. I told the nursery man that I had planted in this way in the rocky soil in America. I invited him to visit me when these fruits should be ripe. He said to me, "You need no lesson from me to teach you how to plant the trees."
Our crops were very successful. The peaches were the most beautiful in coloring, and the most delicious in flavor of any that I had tasted. We grew the large yellow Crawford and other varieties, grapes, apricots, nectarines, and plums.
Letter 350, 1907 Selected Messages, Book 3, page 328

An example of this in my experience: Bermuda is the top of an extinct volcano six hundred miles to the closest land - North Carolina. The population is 65,000. That's crowded. The wind seems to blow constantly and trees struggle to get a foothold. There are no farms or orchards as we know them, and food is very expensive. A retired pastor bought a home on the south side of the island on a rocky hill with enough land for a small garden and 12 to 15 fruit trees. The soil is black about one foot deep then turns white below that. He dug deep holes then filled them in as described in the quote above. His trees, just two years old when I visited him were the healthiest on the whole island. This is the only place on earth I have seen peaches – pears – nectarines – apples - growing alongside coconut - banana and mango trees.

Another example is in Tehama County California where I gave a gardening seminar to a garden club who advertised in the local paper that the following Sunday I was going to teach the " Ellen White Planting Method". A young Seventh-day Adventist electrical contractor was shocked to see this, since his own pastor was uninformed about the subject and the garden club had no Adventist members. He was scheduled to fly to Germany the same day to pick up his bride-to-be, but he postponed his flight and came to my seminar. Afterwards I visited his home and saw some of the healthiest young fruit trees that I have seen in all of North America. The only instruction he had was from the above quote. Truly there is some Divine Wisdom here. Try it on just one little tree and be prepaed for a miracle.

Lynn

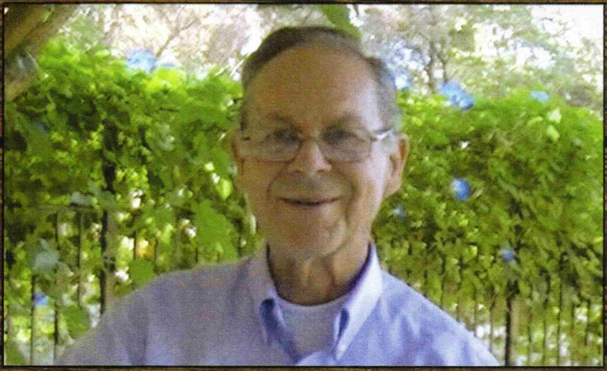
SYNOPSIS

THIS WORKBOOK WILL TEACH YOU HOW TO GROW A ROBUST GARDEN OF HEALING FOODS - FOODS HIGH IN THE NUTRIENTS THE BODY NEEDS AND WHICH ARE SO LACKING IN OUR MODERN PRODUCE. YOU'LL LEARN ABOUT SOIL TESTING, SOLUTIONS FOR BALANCING THE SOIL OF YOUR GARDEN TO OPTIMAL CONDITIONS FOR PRODUCTION, AND METHODS OF GARDENING THAT WILL LEAD TO LUSH, HEALTHY, FAST GROWING PLANTS THAT YIELD HIGH NUTRITION FOODS.

WE'LL WALK YOU THROUGH COMMON PROBLEMS YOU MIGHT FACE WITH PESTS SUCH AS GOPHERS, WORMS AND INSECTS AND OFFER MANY EASY AND AFFORDABLE SOLUTIONS. BY UNDERSTANDING THE BENEFITS OF A GREENHOUSE, WE'LL COVER WAYS TO GROW FOOD YEAR-ROUND IN ANY CLIMATE ON EARTH. YOU DON'T HAVE TO BE IN A PROSPEROUS COUNTRY OR A TROPICAL AREA TO HAVE YOUR IDEAL GARDEN. MANY OF THE THINGS YOU NEED TO GROW YOUR GARDEN ARE RIGHT AT YOUR FINGERTIPS.

YOU'LL BE INTRODUCED TO THE TREE PLANTING METHOD FIRST DEVELOPED BY ELLEN G. WHITE, WHICH WILL ENABLE YOU TO GROW TREES THREE TIMES FASTER THAN LEADING ORCHARD AND FORESTRY METHODS. YOU'LL ALSO LEARN ABOUT USING OCEAN WATER MINERALS ON YOUR GARDEN. OCEAN WATER CONTAINS AN ALMOST IDENTICAL MINERAL COMPOSITION TO OUR HUMAN BLOOD, AND BY USING THE NATURAL BALANCE OF OCEAN WATER, WE CAN SUPPLY OUR PLANTS AND OUR BODIES WITH EVERYTHING THEY NEED TO BE HEALTHY.

- LYNN HOAG



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